DOCUMENT RESUME

ED 346 651 EC 301 263

AUTHOR	Swartz, Eileen, Ed.
TITLE	Thematic Instruction.
INSTITUTION	California Association for the Gifted.
PUB DATE	Sep 91
NOTE	41p.; For the complete volume, see EC 301 261.
AVAILABLE FROM	California Association for the Gifted, 23684 Schoenborn St., Canoga Park, CA 91304 ($15 per year).
PUB TYPE	Collected Works - Serials (022)
JOURNAL CIT	Communicator; v21 n4 Sep 1991
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Acceleration (Education); Classroom Techniques; Concept Formation; Curriculum Development; Educational Practices; Elementary Secondary Education; Enrichment Activities; *Gifted; *Interdisciplinary Approach; Literature; Science Education; Social Studies; *Teaching Methods; *Thematic Approach; Units of Study

ABSTRACT

The 12 articles presented in this issue of a journal on giftedness in school-age children focus on interdisciplinary thematic instruction for gifted students. "Untangling the Web of Interdisciplinary Instruction" (Susan L. Beibelman and Sandy Hall-Chiles) explains the use of a curriculum webbing model to provide structure. "Interdisciplinary Thematic Curriculum" (Sandra Kaplan) notes the particular relevance of this approach to gifted learners. "A Partnership Venture: Introducing Theme-Based Instruction to Teachers and Parents" (Rena Bonne) briefly describes parent participation in New York City's Anderson Program. "Do Concepts Still Have a Place in Teaching Social Studies?" (Dorothy Connet) identifies major concepts and illustrates their use in curriculum development. "Differentiating Content for Secondary Gifted Learners" (James Curry) examines acceleration and enrichment and offers strategies for upgrading content complexity. "Themes in Science: A One-Year Program for Grade 3" (Jacqueline Barber) presents activities focusing on three specific processes and five themes. Two essays--on jumping the penmanship hurdle and writing parallel poetry, by Pat Lawrence and Carrie Millat respectively--are presented next, followed by a section called "Let's Hear It from the Teachers" which contains brief reports by classroom teachers describing specific applications of thematic instruction with gifted students. The final article, "Thinking Blocks for Literature" (Stephen Marcus) offers a strategy for helping students structure their thinking about a work of literature. (DB)

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THE JOURNAL OF THE CALIFORNIA ASSOCIATION FOR THE GIFTED
VOLUME XXI · NUMBER 4 · SEPTEMBER, 1991

COMMUNICATOR

ED346651

THEMATIC INSTRUCTION

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Untangling the Web of Interdisciplinary Thematic Instruction

by Susan L. Feibelman and Sandy Hall-Chiles

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We are drowning in the wealth of the information age. We have the information, but no way to organize it.

James Bennet, Foresight Institute

Teacher preparation for implementing secondary gifted programs has typically meant issuing massive prepackaged curriculum documents, providing keys to special classrooms, assigning select groups of students, and sending instructors down the hall to "go do gifted." On the shelves of these classrooms are stacked the state-adopted textbooks, on the desks sit institutionalized instructional objectives, and at the doors stand overwhelmed individuals who often feel powerless to carry out their missions.

The sheer volume and complexity of curriculum materials purporting to answer the specialized needs of secondary gifted students is inundating. Since program adoption is not always a teacher-based decision, their involvement becomes especially imperative at the curriculum development and implementation stage. This is particularly critical if using an interdisciplinary thematic model, due to its highly substantive nature.

Once secondary educators have decided upon this instructional approach as an appropriate matrix for differentiated curriculum for gifted students, then the ascendant question becomes: how to develop thematic interdisciplinary teachers?

Thematic interdisciplinary curriculum development efforts for gifted secondary students currently focus on their mastery of imaginative thinking skills common to the disciplines. Thematic experiences lead to student exploration of broad-based issues and trends. This approach speaks to the curricular needs of gifted students because it facilitates:

- opportunities for dialogue and cooperative learning with intellectual peers;
- opportunities to apply productive thinking skills to self-selected studies in order to produce authentic products;
- opportunities to work with mentors to explore real-world applications of abstract concepts; and,
- opportunities to develop leadership.

But, at a more fundamental level, what skills does the teacher of the gifted require to confidently effectuate this approach?

The challenge at present is two-fold. First, teachers of the gifted must develop curriculum which both engages the learner and is perceived as *user friendly* by the teacher. Secondly, and where teachers often reach impasse, is in their search for curriculum development strategies which provide vehicles for making essential, broad-based connections among content areas. They must be guided in ways of recognizing and articulating these relationships in their crafting of a thematic interdisciplinary curriculum. In this way, structure can be used to impose order upon chaos.

The curriculum webbing model provides a viable method for achieving both objectives.

Continued on page 7

EC 301263

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GUEST EDITOR'S COLUMN

Eileen Swartz

Beyond Integrating to Interdisciplinarity

Integrating the content areas to formulate a motivating, relevant, and thought-provoking approach to activating the Social Studies framework has always felt natural to me. So it was an easy shift to utilize a "universal" theme and include social studies as one of many disciplines in an interdisciplinary approach to learning.

Such themes as Influences, Patterns, Power, and Change facilitate the use of generalizations. These "big ideas" are proven or disproven by students in their research (both academic and experiential) for facts, using critical thinking skills such as deductive or inductive reasoning to analyze the data collected. As they summarize the data from their investigations, the students generally are involved in a variety of creative activities in the different disciplines that utilize and/or demonstrate their conclusions.

The further connecting of ideas across the disciplines has given additional depth to thematic instruction. For example, let's assume that students have researched the generalization; "Change can be revolutionary or evolutionary" by examining environmentalism (science), sociology (social studies), and art. Interdisciplinarity of ideas could also be examined and evaluated through the perspectives of an anthropologist (social studies), a philosopher, or an economist, depending on the focus or objectives of the particular lesson or study. From this kind of experience in interdisciplinarity, the students will grow in their ability to think in the "bigger picture;" thus, their problem solving skills will have a wider range of applicability in variable situations.

My sense of quality education has been enhanced by encouraging students to "bridge" the disciplines in their thinking. This further perspective provides an additional dimension to both teaching and learning capacity, and increased depth of understanding.

As expressed by a fifth-grade student recently following an interdisciplinary study of Change, "My favorite thing was weaving different subjects and thinking in new ways." Hopefully, this practice will help students experience learning in a way that is not only motivating and interesting, but valuable in their total life experience.

Eileen Swartz is a Demonstration Teacher at the USC-NCL Teacher Center. She can be reached at 213-827-1971.

PUBLISHED BY THE CALIFORNIA ASSOCIATION FOR THE GIFTED

Administrative Assistant, Sharon Mountford, 818/888-8846

The *CAG Communicator* is published five times during the year, in September, November, January, April, and June. Opinions expressed by individual authors do not necessarily represent official positions of the Association. Subscriptions are available to non-members at an annual cost of $15.00.

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PARENT TO PARENT

Ideas to Exchange and Enrich

edited by Liz Mayhew and Terrie Gray

Have you ever wished you had a friend you could be absolutely honest with about the joys and burdens of parenting a gifted child? Someone who understood the unique excitement, concerns and frustrations? We hope the new "Parent to Parent" column, debuting in the January issue of the CAG Communicator, will provide many opportunities for us to strengthen and encourage each other. We also hope to be able to spark long-lasting friendships!

Although we (Liz, in Southern California, and Terrie, in Northern California) have lots of ideas about how this section can be put together, we would like to be responsive to your needs. Featured in almost every issue will be a thematic question to which we will invite responses. These questions will range from interacting with your child, or working harmoniously with the classroom teacher, to shaping district policy. We will launch some of these questions, but hope many will come from you.

The "Parent to Parent" column will be an ideal place for parents to brag a little (or a lot). We are collecting "Good News" anecdotes involving you and your children. Please share your feelings, concerns, ideas, and questions. We would like to hear about your personal goals and how you nurture your own gifts. We encourage you to submit articles and to send us your ideas for articles you would like to write or read. To get us started, please answer a couple of questions for us.

1. How do you tell your friends about your gifted children?
2. How do you explain "gifted" to your children?

We look forward to hearing from you! Please send questions or contributions to:

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THE VIEW FROM SACRAMENTO

by Barbara Brandes

At the center of a student's educational experience is the curriculum – the student's engagement with the world of ideas in the company of fellow learners, books, and other media – all orchestrated by the teacher. Appropriate differentiation of curriculum for gifted and advanced learners must be based on a shared understanding of what constitutes the core curriculum.

California's curriculum frameworks have been the flagship of educational reform over the past eight years. Collectively, the framework documents set forth principles that represent a new consensus about the disciplines and a synthesis of understanding about the learning process. Often referred to as the "thinking, meaning-centered curriculum," California's new core curriculum provides a much richer vision of academic excellence for our most able learners than any more limited, skill-based curriculum. However, for those of us especially concerned with the education of gifted and advanced learners, what has been missing so far has been clear guidance and task development related to differentiating the core curriculum to provide advanced learning opportunities. The frameworks support the development of curriculum which is complex enough to challenge advanced learners, but they do not specifically address methods of differentiation.

During this past year, participants in our Jacob Javits project, "Building a Coalition for Excellence: Project Open GATE," expressed great interest in curriculum and instructional strategies that nurture academic talent. In a survey of participants at our last teleconference in May, this was the topic selected as the top priority for future staff development activities. Accordingly, we will focus our efforts during 1991-92 on curriculum. We at the California Department of Education (CDE) are currently engaged in a unique collaborative effort with CAG to develop a position paper on differentiating the curriculum to provide advanced learning opportunities. This position paper will be an essential first step in building consensus among educators of the gifted and curriculum leaders on the general principles of differentiation. Staff development events through Project "Open GATE" for 1991-92 will enable curriculum leaders and practitioners to begin to specify and exemplify how such differentiation can occur in the classroom.

I also want to take the opportunity in this column to inform you that CDE is currently engaged in some internal reorganization activities. This reorganization is in part a response to the state budget crisis and reduced operating funds at CDE. However, the reorganization also provides an opportunity to take a fresh look at priorities and to focus our resources and efforts on important aspects of the reform that remain to be accomplished. While final decisions have not been made as of this writing, it appears that the GATE unit will be brought into closer alignment with the department's other leadership activities in curriculum. I see that as an important opportunity for encouraging the dialogue about curriculum to yield stronger support for advanced learning opportunities. Responsibilities associated specifically with gifted and talented education have not yet been announced. CAG will be kept informed as those decisions are made.

Interdisciplinary Thematic Curriculum

Sandra Kaplan

The curriculum, or *what* is taught to gifted students and *how* these learning experiences are designed, should be the major justification for a differentiated education for these students. The curriculum rather than the organizational design for teaching or the administration pattern of a program should be the basis for defining and evaluating the differentiated education for gifted students. Although thematic interdisciplinary curriculum did not originate with the education of gifted students, it has been a concept embraced by educators of the gifted as a means of providing differentially for these learners. There have been many reasons for this relationship:

- The study of a theme represented by a universal concept such as CHANGE provides a frame of reference for curricular decision making that enables the teacher or curriculum developer to select appropriately accelerated and/or enriched subject matter (content) and skills (processes) to meet the needs and interests of gifted students. The elastic and abstract qualities of the theme can facilitate the organization of various types of learning opportunities within a single curriculum. For example, CHANGE, the theme, can be an organizing element for the basic study of topical areas such as weather and characterization in the American novel, as well as for the more advanced or sophisticated study of astronomy and satire.

  The theme facilitates the flexible inclusion of varied topical areas of study, while it provides consistency and comprehensiveness in the curriculum design. It is the theme that allows for the depth of learning advocated by theoreticians as an essential quality of a differentiated curriculum for the gifted.
- The importance of interdisciplinary teaching and learning for gifted students can best be referenced to the qualities of breadth and pace of learning attributed to a differentiated curriculum. The emphasis on making connections between and across disciplines promotes more complex understandings while simultaneously hastening the speed by which the subject matter can be comprehended and assimilated. Interdisciplinary learning demands that the students recognize and analyze the contributions of the topics in the disciplines to the meaning of the theme. Integration and interdisciplinary learning are often not clearly defined. Whereas integrated learning is using the disciplines to enhance the meaning of a given topic, interdisciplinary learning is using the topics in many disciplines to clarify the meaning of a theme and/or generalization. Integration is exemplified in a study of Mexico wherein students write a story about Cinco de Mayo (language arts), discuss economic trends in the country and compute the ratio between the peso and dollar (math), and research mores of the culture (social studies). Interdisciplinary teaching/learning is exemplified by the study of the theme CHANGE wherein students determine how various cultures (social studies), economic systems (math), and literary styles (language arts) have changed either within a specific time period or over many time periods.
- The study of generalizations, principles, and theories is relevant to gifted learners because they activate the use of productive thinking skills (critical and creative thinking, problem solving and logic) in the context of assimilating substantive subject matter or content. For example, in the study of CHANGE, students are determining the reliability and validity of the generalization: Time is an agent of change. The generalization elaborates the meaning of the theme and provides the impetus for inquiry, dialectical thinking, and independent explorations and interpretations. References to the development of open-ended or divergent and productive thinking, learning-to-learn skills, and independent study are often characteristics of a differentiated curriculum for the gifted. These can be reinforced in either the inductive or deductive analysis of a generalization integral to the study of a theme in an interdisciplinary curriculum. It is the generalization that initiates the learners need to study interdisciplinarily in order to support or negate the meaning of the generalization.

Thematic interdisciplinary curriculum currently is advocated by the California State Frameworks as an important attribute of a curriculum for all students. The contemporary challenge for educators of the gifted is to *refine* the meaning of thematic interdisciplinary curriculum for the gifted and to determine the compatible relationship between gifted and all other students who are learning in a thematic interdisciplinary curriculum.

Sandra Kaplan is President of CAG, Visiting Professor at the University of Southern California, and Associate Director of the National/State-Leadership Training Institute-Gifted/Talented. She may be reached through the CAG office.

A Partnership Venture: Introducing Theme-Based Instruction to Teachers and Parents

by Rena Bonné

The Anderson Program defines itself as a "New York City public school program created in a partnership of parents, school, and district to meet the special needs of children with superior intellectual potential." Since its beginning five years ago, the realization of this partnership has provided its fair share of challenges as well as rewards.

Parents in the Anderson Program participate across the spectrum of parental involvement. They volunteer in the classroom, conduct extensive fundraising campaigns, attend workshops or meetings on a regular basis, and elect representatives who make up the Anderson Advisory Council.

The Council, composed of teachers, school administrators, and parent representatives, meets monthly to discuss issues of general concern to the program. Over the years, Advisory Council meetings have been devoted to questions regarding differentiated curriculum, staff development, and school policy in general.

With such an actively responsive parent body to consider, the program director and teaching staff were well advised to plan the introduction of theme-based instruction carefully. It was necessary for parents first to understand what theme-based teaching really meant and then to apply that understanding in order to assist their children with homework and independent study assignments.

Housed in a heterogeneous public school on the Upper West Side of Manhattan, the Anderson Program maintains two classes on every grade, beginning with kindergarten and continuing to grade five next year. During the summer staff development sessions, each grade-level pair of teachers selected an interdisciplinary theme for the upcoming year. The kindergarten teachers very appropriately chose Beginnings and, following their lead, the first-grade teachers selected Change. Second-grade teachers opted for Systems, a choice they later discovered to be difficult to implement with their classes. The third- and fourth-grade teachers, sensitive to the affective needs of their children, identified Conflict and Relationships, respectively, as their themes.

Once the themes had been defined, the teachers began to develop their curriculum. Together, they focused on the subject areas in which the thematic ramifications were most obvious. Fourth-grade science, for example, is concerned with endangered species, so the fourth-grade teaching team began to design learning contracts which asked students to think about the relationship between technological progress and the destruction of the natural habitat. One of the second-grade teachers decided she would give added emphasis to her unit on the solar system, while her colleague developed an independent study project in which students researched transportation systems.

Now we were ready for parent orientation. After the independent study and research projects had been planned, the Advisory Council meeting was expanded to a general orientation session for all Anderson parents. We first discussed the move towards an interdisciplinary curriculum and its significance for gifted children. Parents were, by and large, receptive to the idea. In particular, the working definition of knowledge and learning as dynamic processes extending beyond the somewhat arbitrary limitations of specific disciplines, appealed to them.

One teacher from each grade level introduced the theme for the year. This part of the meeting seemed to provoke the most questions. Parents were curious about the reasons for each selection, and it was not always easy to supply a clear-cut rationale; however, the opportunity to integrate cognitive with affective learning excited the majority of parents in attendance that night.

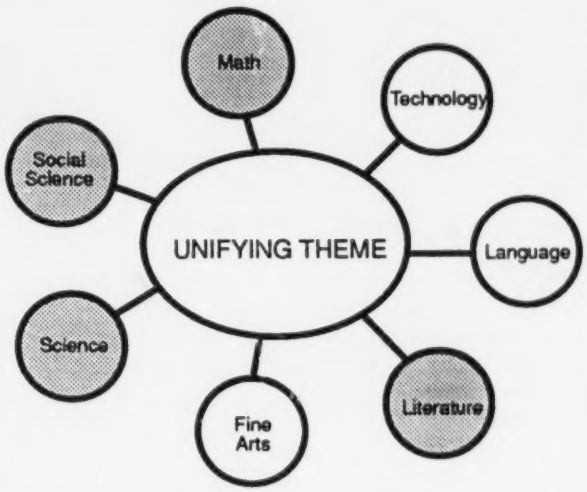
The last part of the meeting was devoted to homework assignments in terms of theme-based instruction. As always, parents were reminded that their role was to assist the child, rather than completing the project for him or her. We also talked about the ways in which home-centered discussions could incorporate thematic considerations. One second-grade mother suggested that parents survey the different systems in their homes with their children. An expectant kindergarten mother asked about presenting the beginning of a new life to her child's class! A future workshop to consider additional ways of extending thematic instruction into the home is scheduled.

It is unfortunate that, for whatever complex matrix of reasons, any change in curriculum is at first viewed with some degree of suspicion on the part of parents. Perhaps they have lived through too many in too short a time, or perhaps the results have not always been evident; however, this particular venture had an enthusiastic and supportive launching. If, after working together, we can say that the parameters of teaching are limited neither by subject nor by school walls, then we will truly find ourselves in the vanguard of educational reform.

Rena Bonné has directed the Anderson Program for the past two years. She also has written and edited high school literature texts for students and teachers. She can be reached at Public School 9 100 West 84th Street, New York, NY 10024

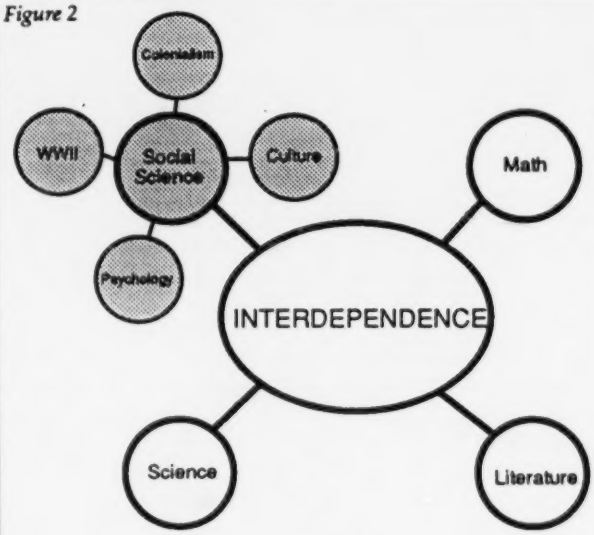
Feibelman and Hall-Chiles: *Continued from page 1*

Figure 1



What is the unifying theme?
Which disciplines/content areas will be involved in this unit?
Teachers select the broad fields of study to include in the individual unit to be developed.

Figure 2



What broad topics within each instructional area relate to the theme?
Teachers should work within content area groups to draw a curriculum web which responds to the theme's issue. For example, social studies teachers have noted that interdependence pervades colonialism, culture, psychology, and WWII.

Since it acts as a catalyst for developing curriculum units, teachers are readily able to discern and subsequently internalize the myriad relationships among content, concepts, and resulting ideas. The curriculum web provides a structure for diagraming content and concept relationships to generate interdisciplinary instructional ideas tied to a theme (see Figure 1).

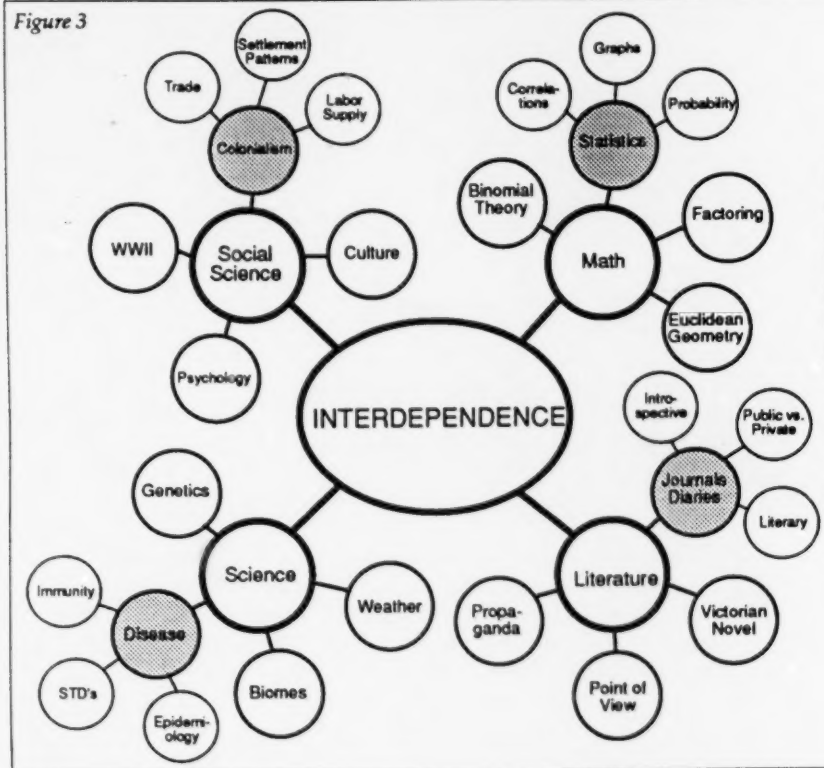
Guided by sequential productive thinking episodes, teachers are encouraged to work in interdisciplinary teams. By formulating a network for tying content-related topics to a unifying theme (see Figure 2), curriculum writers move naturally from broad-based topics within the content into subject-specific instructional areas. The process allows teachers to speak to both required curriculum demands while also differentiating for gifted students (see Figure 3). The strength in this model is its continual referencing of the unifying theme because it requires teachers to articulate relationships between each content elaboration and the theme as they develop. By abstracting basic content and concepts of the disciplines, teachers can determine the range of possibilities for idea generation as connections emerge across fields of study (see Figure 4). This process leads to the development of a variety of interdisciplinary learning experiences, to form the underpinnings of thematic curriculum development endeavors (see Figure 5).

The field of gifted education is beginning to address the issue of differentiated curriculum for secondary students while not becoming limited to the vertical acceleration of traditional honors and Advanced Placement course offerings. We are clear in our vision that curriculum for gifted students is not achieved by simply building more repetitious assignments into the content. It is accomplished instead by focusing more intensely upon discovering the commonalities of ideas while traversing the disciplines. Our collective success at achieving this vision depends on the development of teacher competencies in interdisciplinary thematic curriculum writing and implementation. Not until teachers perceive the process as *user friendly* will the larger goal be met through using an interdisciplinary thematic curriculum to differentiate instruction for secondary gifted students.

(References and figure 5 are on page 9.)

Susan L. Feibelman is currently a Program Specialist for the Dallas Independent School District's Gifted and Talented Program for secondary students. She can be contacted at 5000 S. Oakland, Dallas, TX 75215.
Sandy Hall-Chiles is a classroom teacher at DISD's Talented and Gifted Magnet High School and can be reached at 2200 Dennison, Dallas, TX 75212.

Figure 3

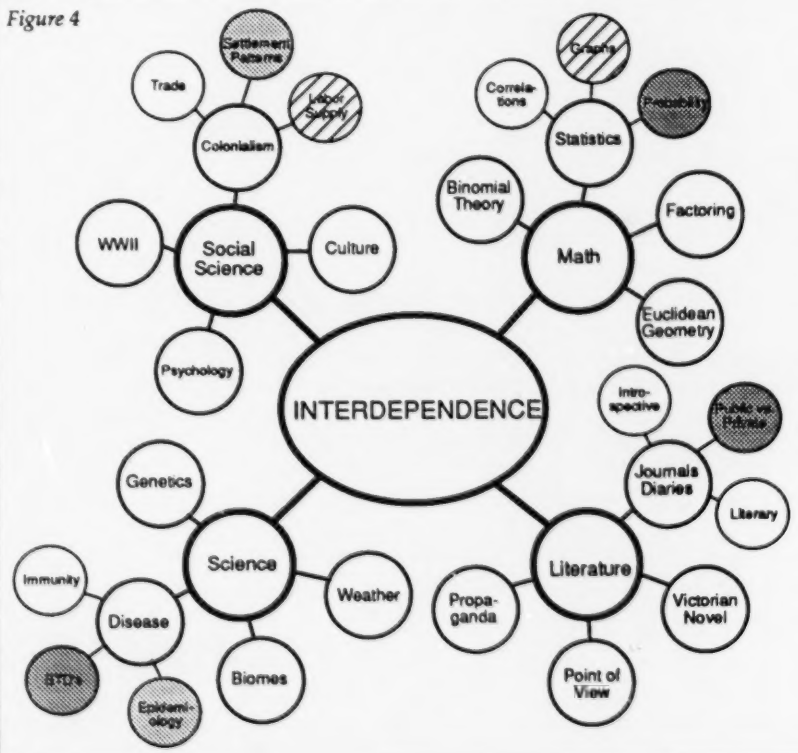


What content area subtopics will be selected to develop the interdisciplinary theme?

Teachers regroup as a team to share content webs. They select ideas from each content area using these criteria to guide their choices:

- *do these subtopics clearly relate to the theme?*
- *can this be taught with resources and time available?*
- *are students highly interested in studying these topics?*
- *can this encompass any other existing school-wide emphasis?*

Figure 4



Which discrete subtopic elements could relate to those in other instructional content areas?

Teachers write sentences to formalize the relationships among the content area subtopics to provide rationale for their linkage. For example:

- *settlement patterns could affect the spread of communicable disease;*
- *labor supply can be depicted through graphs; and,*
- *probability might predict an increase in documentation of STD's, etc.*

Unifying Theme:

Interdependence

Learning experience:

- Students will determine the interdependence of economics, health care, and journalism to produce a persuasive essay to convince imperialist colonizers to improve conditions for the colonized.

In drafting the learning experiences/objectives, teachers would review the component parts of the interdisciplinary curriculum webs and use their previously written relationship sentences as the bases for the content of the curriculum grid above. The next step would be to design a series of activities for each learning experience to work toward mastery of content and concept to give rise to the interdisciplinary ideas.

Figure 5

References and Resources

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CALENDAR OF CONFERENCES

October 26, 1991
ASDEG Conference
Ad Astra per Aspera
San Diego Convention Center
For information call Ann MacDonald, 619/232-0468.

November 2, 1991
Redwood Region Conference
Helping the Underachieving Gifted: Strategies for School and Home
Red Lion Inn in Eureka
For information call Sue Benzinger, 707/443-7949

November 6-10, 1991
NAGC Conference
Catch the Dream
Kansas City, MO
Call NAGC for information, 202/785-4268.

November 8, 1991
Mirman Annual Institute
Los Angeles, CA
For information call 213/476-2868.

November 9, 1991
AEGT Annual Conference
Challenges '91
For information call Marjorie Bowles, 408/267-2402.

February 21-23, 1992
30th Annual CAG Conference

CAST A WIDE NET

Long Beach, CA

Last call for presenters is on page 39 of this *Communicator*. Conference brochures will be mailed this month.

10

Do Concepts Still have a Place in Teaching Social Studies?

by Dorothy Connet

the California **Concepts** Collection

Super-Concepts for Grades K-12
Developed by the California Council for the Social Studies

Change
Conflict
Continuity
Culture
Diversity
Interdependence (or Interconnectedness)
Justice
Rights
Scarcity
Technology
Values

Figure 1

Concepts are so basic to social studies learning that they are either building blocks or stumbling blocks to a student's understanding of social studies content. Certainly you can teach content without calling special attention to concepts. Students will acquire some understandings on their own merely because they will organize their thoughts around key terms that seem to have particular recurrent associations. But why not help students consciously build and then identify them? Or why not, at times, merely present them as labels and give examples that help students further define and sort their mental associations?

It was a shock to me when an astute curriculum politician told me in hushed tones and in secret that I should keep the California Concepts project from being published in order to get along well in the political arena. I thought that was absurd. Was I out of step with the drumbeat of current political curriculum reform? I wondered if I had missed some essential revelation that all curriculum people knew. I set out to examine my perceptions and, as a result, became even more convinced of the need to include the consideration of concepts as an important element in one's curriculum planning for teaching social studies at any level.

I participated in the California Concepts project as one of twelve social studies educators from throughout the state who represented all levels of teaching, Grades K-College. We studied the new California History-Social Science Framework, Grades K-12, and came up with what we (through a consensus process) considered to be the major concepts for each grade and a list of Super-Concepts (Figure 1) that seemed to overarch all grade levels.

Prior to serving on this committee, I had analyzed the framework on my own and listed themes, topics, and key concepts for every identifiable topic stated or implied in the framework. I reexamined my lists of concepts to select the ones I thought were the most essential and submitted my choices. The challenges and negotiated changes in the final list were actually fun to experience. (My concept of "fun" is not, however, shared by all.)

The California Concepts Collection was not meant to be the ultimate list. If it can stir interest, be a starting point for others, or if it encourages further dialogue, then it has served its purpose.

Admittedly, I had internalized Hilda Taba's strong conceptual approach to social studies teaching over twenty years ago, but I resisted digging out the list of her key concepts until the selection process was over. It is interesting to compare the California Concepts Collection (based on the new framework) with her list (see Figure 2). As you will note, there are several terms that are similar or related in meaning, although the words vary; e.g., "tradition" and "continuity" imply similar meanings; also the terms "differences" and "diversity" share a kinship. Can a concept smell as sweet by any other name? Methinks, it is so.

Certainly the changes in our own society these past two decades and the current popularity of particular terms can be seen in the word choices in the recent framework and consequently in the Concepts Collection. For example, the addition of the term "technology" reflects recent dominant societal activities and the importance of the terms "justice" and "rights" (particularly "human rights") are current global concerns, not just relics associated with the founding of the United States. The term "scarcity" has always been part of the basic vocabulary in economics, but it is part of the key vocabulary of many disciplines in the social studies today. Due to the depletion of natural resources worldwide and to the increasing awareness of economic competition and conflict between the "haves" and the "havenots" within our country and our world, "scarcity" is now a critical concept in the social studies.

The initial resistance to the recognition of concepts on the part of a few powerful curriculum politicians seemed to be due to the strong emphasis on concepts in the previous frameworks. Calling attention to concepts again could have interfered with promoting the image of a totally new framework. Also, there was a concern that teachers would teach con-

Hilda Taba's Key Concepts for Grades 1-8 Social Studies

Cultural Change
(Cultures never remain static)

Modification
(As people and environs interact, both change)

Conflict
(Interaction involves struggle)

Cooperation
(Joint effort)

Causality
(Events have antecedents)

Differences
(Both the natural and social worlds vary)

Interdependence
(People and groups are mutually dependent)

Power
(Influence on decision-making)

Societal Control
(Liberty is constrained in all societies)

Tradition
(To some extent, values and ways of living are retained)

Values
(Objects, behaviors, ideas, institutions deemed important)

Figure 2

cepts as isolated vocabulary words and not in context if they were provided with concept lists, I was told.

Another reason for the resistance to concepts was due to the age-old contest between the content and process people, particularly in the turf wars at the university level where careers become identified with particular approaches. The "content" leaders are currently in vogue in the reform and restructuring movement in the drive for historical and cultural literacy. Concepts reek of process thinking and are therefore suspect. To most of us, data, concepts, generalizations, and any and all ways of acquiring them are acceptable and we glean the best available from the harvest of the latest research of academicians.

Although the politicizing of curriculum does affect our choices in teaching and local curriculum development, as we experience several trends and movements over time, the patterns of what works well emerges and we are not limited to the dictates of turf wars. We know we cannot teach narrative history effectively without concepts and vice versa.

The synthesis of content, mental constructs (including concepts), and effective strategies takes place in the mind of the classroom teacher, the most important curriculum director in the educational system. All of this is done in the context of student needs, talents, and experiences, teacher and administrator expertise and attitudes. The availability of time to plan and of resources and equipment are realities that also influence the quality of the school social studies program, sometimes more than attempts at "societal control" by curriculum gurus

The Role of Concepts In Selecting Literature for History-Social Science

Now that we have put concepts in perspective with the myriad of other considerations, it would seem that concepts are really a minor aspect in selecting literature. Not so. They can help, along with content themes and topics, to focus a program, particularly a literature-based program.

It is amazing how many classrooms are spending large blocks of time on popular works that have minimal relevance to social studies learning and yet are deemed the heart of the social studies program in those classrooms. Usually the rationale for using them is based on their inclusion on somebody's shopping list of books suggested for integrating English-Language Arts and Social Studies. Most presentations I attend on literature, dwell on the storyline of each book and the fun things you can do with them in follow-up activities. Seldom do you hear how it contributes to the student's conceptual foundation or understandings about major issues or how it provides comparative information that can be researched in other identified sources as well.

One systematic way to analyze the content of each literary work to determine its value to social studies teaching is to create a course outline for the year based on the history-social science framework. To create this guide you could do the following:

1. Record the major themes given in the grade-level descriptions section of the framework.
2. List potential topics for each theme suggested and implied by the narrative there.
3. Identify key concepts that support the themes and topics, and list them beside each topic.

Now select those forms of literature that give maximum support to your program's themes, topics, and concepts. Additionally, you might also determine what attitudes and problem-solving challenges the works offer and whether or not they would appeal to students. Does the literature have a memorable quality? Is it a story well-told? A sample analysis is given in Figure 3.

Students need to use varied forms of literature in social studies. An examination of suggested literature titles in the history-social science framework (1987) resulted in the following identification of varied kinds of works to be used:

Stories	Fairytales	Nursery Rhymes
Folktales	Fables	Historical Fiction
Legends	Myths	Nonfiction
Biographies	Tall Tales	Songs
Poetry	Narratives	Essays
Quotations	Parables	Sermons
Addresses	Speeches	Autobiographies
Plays	Essays	

Also, a variety of formats are given in the framework as informational sources. They include:

Trade books	Oral histories	Diaries
Picture files	Journals	Almanacs
Excerpts	Documents	Codes & Laws
Teachings of	Timelines	Maps, Atlases
famous leaders	Dances	Drama
Drawings	Paintings	Music

Analysis of Literature
For use in History-Social Science
Grade 3

Title: *Heron Street* by Ann Turner
Theme(s): **Our Local History:**
Discovering Our Past and Our Traditions

This book could be used to support any or all of the following **Topic(s):**	**Related Concepts/ Key Terms**
Topic 2. The effect that people from the past have on the present life of the local community.	chronology cause/effect community
Topic 3. The ways in which people used the local resources and how they changed the area.	natural resources development exploitation change
Topic 5. The influences of natural environment on the economic and recreational activities of residents in the local area.	landforms water bodies resources
Topic 6. The future needs of the local area and the issues involved. Also, the value of governmental, private industry, and citizen efforts in working to better the quality of life in the local community.	future issues points of view cooperation social participation rights responsibilities

Comments: **Continuity and Change** concepts are strong themes throughout the book. Would lend itself to comparisons of kinds of growth in our local area. Visual impact strong. Text is poetic and memorable. The best overall book for Grade 3. Related books: *No Star Nights; House on Maple Street.*

Figure 3

Architecture	Games	Memoirs
Debates	Novels	Mock trials
News articles	Letters	Court writings
Propaganda	Posters	Political cartoons

The use of literature in the History-Social Science program can be a natural progression of the current humanities movement from the English-Language Arts into the content areas. It can be exciting and beneficial to social studies learning if the literature is selected within a management plan that promotes the significant content, concepts, and generalizations that are the building blocks of the subject area. Without a plan, the social studies program could evolve into a mere extended language arts program and virtually lose the identity and power it could otherwise offer students in helping them to deal effectively with and to understand the world in which they live and in which they need to be a viable part.

It is the classroom teacher who effectively devises and manages humanities-rich social studies learning that "writes on children's minds." He or she is probably the most important source of literary experience and of motivation towards social studies inquiry students will have, as this student attests:

> *"In her classroom our speculations ranged the world. She breathed curiosity into us so that each morning we came to her class carrying new truths, new facts, new ideas, cupped and shielded in our hands like captured butterflies. When she went away, a sadness came over us; but the light did not go out. She had written her signature upon us; the literature of the teacher who writes on children's minds.*
> *I have had many teachers who taught me soon forgotten things, but only a few like her who created in me a new direction, a new hunger, a new attitude. I suppose to a large extent I am the unsigned manuscript of that teacher. What deathless power lies in the hands of such a person."*
>
> John Steinbeck, *On a Former Teacher*

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Differentiating Content for Secondary Gifted Learners

by James Curry

Draft excerpt from an upcoming publication by the Maine Educators of the Gifted and Talented (MEGAT)

The content dimension of curriculum should be differentiated for gifted learners in order to respond to their academic needs. Traditionally, educators have modified subject matter through strategies of acceleration and enrichment. However, subject matter may also be modified by changing the level of *complexity* within an area of study. This article examines the traditional approaches of acceleration and enrichment and then provides strategies for changing the complexity of content.

Acceleration

Curricular strategies for implementing content acceleration include changing the

(1) entry level of learning,
(2) rate of learning, and
(3) exit level from a learning experience.

Decisions regarding acceleration should be based on a student's academic readiness, motivation, and social maturity, and the ability of the school to support the effort. The strategies of acceleration may be utilized effectively when there exists a well-articulated curriculum that is responsive to the developmental and academic needs of "average" students at specific grade levels and within areas of study. In using acceleration, the curriculum *per se* is not being modified; rather, the "placement" of the student in the curricular sequence is changed.

Changing **"entry level"**: A student begins work in an area of study earlier than is prescribed by the standard curriculum. For example, a student may study algebra in the sixth grade or read a work by Shakespeare in the eighth grade, based on the student's readiness to engage in and successfully complete the work. Management strategies for changing entry level include the use of

(1) multi-level instructional materials within a classroom,
(2) skipping a grade,
(3) early enrollment,
(4) special summer programs, and
(5) dual-enrollment scheduling in which a student divides his or her time between two different grade-level classrooms.

Changing **"rate of learning"**: A student moves through a course of study at a faster pace than is prescribed by the standard curriculum. For example, a student may complete a unit of study in biology in two weeks instead of the usual four weeks, or may complete two semesters of mathematics in one semester. Changing the rate of learning over time may allow a student to graduate from high school earlier than her/his age peers. Management strategies for changing the rate of learning include:

(1) minimizing redundant, time-consuming review assignments,
(2) eliminating unnecessary rote and drill exercises,
(3) using self-paced individual or small group work, and
(4) providing programmed instruction.

Changing **"exit level"**: A student leaves an area of study after demonstrating competencies in terms of content and/or skills. For example, a student may take an examination in order to eliminate the need to continue her/his work at a previously mastered level of study. This may be done for a lesson, a unit, or an entire course. Management strategies for changing exit level include allowing a student to

(1) "test out" of portions of the curriculum by using a teacher-made or a standardized test,
(2) submit a portfolio of work completed in the area of study, and/or
(3) complete a project in which the required work is subsumed in the presentation of materials.

Strategies for acceleration may be combined in various ways. For example, the Advanced Placement Program and the International Baccalaureate Program allow students to change the entry level, rate of learning, and exit level of the regular curriculum. These and other methods of acceleration provide useful means for educators to respond to the needs of academically gifted students who learn rapidly, who retain information well, and who are motivated to learn in an area of study.

The following actions should be avoided

draft excerpt from Writing Units That Challenge High School Students: A Guidebook For & By Educators, *(in-press), edited by J. Samara and J. Curry for Maine Educators of the Gifted and Talented (MEGAT).*

when using the strategies of content acceleration:

- assuming that if a student is ready to move ahead in one academic area then the student should be ready to move ahead in all other academic areas;
- allowing a student to accelerate while in one grade level but not continuing the practice in following grade levels;
- assuming that students will "pick up the basics" someplace else and that direct instruction is, therefore, unnecessary; and
- assuming that all areas of content are equally amenable to acceleration.

Strategies of acceleration allow students to enter, move through, and leave areas of study based on their academic readiness rather than on their chronological age or their grade-level placement.

Enrichment

Enrichment of content is useful in meeting the needs of all students, including gifted learners. The major strength of enrichment is that it provides a means to respond to the intense interests, the broad interests, and the innate curiosities of academically gifted students.

Curricular strategies for implementing content enrichment include changing, in a content area,

(1) the depth of study,
(2) the breadth of study, and
(3) the intensity of study.

As with acceleration, decisions regarding enrichment should be based on a student's academic readiness, motivation, and social maturity, and the ability of the school to support the effort. The concept of enrichment is based on the assumption that the regular curriculum is comprised of *selected* facts, details, rules, and concepts, and that there is additional worthwhile information that may be added to the content as needed. In enrichment, the curriculum is being changed through extension.

Changing **"depth"**: A student studies sophisticated information beyond the parameters set by the standard curriculum. For example, a student might pursue an "in-depth" study focusing on determining the contributions of specific ethnic groups to the development of culture in the United States. The nature of the information should be such that the student is not simply learning more facts, details, and rules. Rather, the student should be learning and reflecting upon beginnings, influences, causal relationships, and possible future implications within the area of study. More sophisticated types of information will also require abstract thinking skills, advanced research skills, and more complex product forms. Management strategies for changing depth include

(1) independent study programs,
(2) protege-mentor programs,
(3) honors courses, and
(4) use of sophisticated resources and instructional materials.

Changing **"breadth"**: A student examines related areas of study beyond the parameters set by the standard curriculum. For example, a student might pursue a broad study that focuses on determining the long-term consequences of a specific piece of literature. Areas of affiliated study may include other disciplines, periods of time, cultures, modes of communication, and perceptions. Management strategies for changing breadth include

(1) learning and resource centers,
(2) independent study programs,
(3) multi-disciplinary seminars, and
(4) issue- or problem-focused programs.

Changing **"intensity"**: A student pursues an area of study beyond the level of commitment and/or the amount of time devoted to it by the regular curriculum. For example, a student might become immersed in a longitudinal study of ways in which social or educational programs impact the roles of adolescents in a specific culture. Management strategies for changing intensity include

(1) individual or small group work,
(2) protege-mentor programs,
(3) apprenticeships and internships, and
(4) specialization schools.

The following actions should be avoided when using strategies of content enrichment:

- enriching content that really should be accelerated;
- extending content to areas not requiring academic rigor;
- providing "enrichment" that is more "entertainment" than instruction;
- limiting enrichment to simple "exploration."

Strategies of enrichment allow students to engage in academic pursuits that include appropriately sophisticated and challenging content based on ability and interest rather than on their chronological age or their grade-level placement.

Complexity

While the acceleration and enrichment strategies for content differentiation have been used in many programs, some consideration should be given to changing the complexity of the subject matter. This may be done by "upgrading" the content to the study of issues, problems, and themes (Kaplan, 1979).

An "**issue**" is debatable and not necessarily resolvable. Issue-based curriculum requires that there be some form of genuine "controversy" within an area of study. For example, a student may examine the question, "In a democracy, how should society balance the need for individual freedom with the necessity for powers of central authority?"

It is essential that a student have sufficient background in the area of study to assure that the issue will be considered on merit. Hence, in the example given, the student should read important documents (such as the Code of Hammurabi and the United States Constitution) prior to pursuing the issue. Management strategies for providing issue-based curriculum include

(1) debate courses,
(2) advanced academic seminars,
(3) journalism classes, and
(4) extended units of study within the regular classroom.

A "**problem**" is (at least potentially) solvable. There must be a genuine need for solution within the context of the area of study. For example, a student may generate alternative solutions for the problem, "In what innovative and effective ways might a democratic society promote recycling of products and materials in order to protect the environment and improve the economy?"

As with issues, it is essential that a student have sufficient background information to allow for the solving of the problem. Thus, in the example given, the student should have studied reports, editorials, and articles that relate to ecology, public policy, and other related areas. Management strategies for providing problem-based curriculum include

(1) Future Problem Solving Bowl,
(2) Odyssey of the Mind,
(3) Model United Nations, and
(4) Extended units of study within the regular classroom.

A "**theme**" is broad-based and may be used within a discipline, between disciplines, or among disciplines. Examples of themes (S. Kaplan & J. Curry, 1985) include the following: change, community, conflict, exploration, force, patterns, power, structure, and systems. Kaplan (1985) asserts that for a theme to be useful in organizing curriculum, generalizations about the theme must be used. The following generalizations (J. Curry & J. Samara, 1990) could be used for the theme, "patterns":

- patterns have segments that are repeated;
- patterns allow for prediction;
- patterns have an internal order; and
- patterns may have symmetry.

In the Georgia State Department of Education (1990) publication, *Curriculum Guide for the Education of Gifted Students, Grades 9-12*, the following examples are used for showing how the generalization, "patterns allow for prediction," may be embedded into objectives for teaching within and across content areas:

Language Arts:

In their study of tragic heroes, the students will be able to use what they have learned to verify or dispute the assertion that the plays *Hamlet*, *King Lear*, *Macbeth*, and *Othello* have commonalities that allow for prediction regarding the development and the demise of the protagonist. Students will use primary sources to collect data and will present their views in a class discussion.

Mathematics:

In their study of tetrahedrons, the students will be able to use what they have learned about three-dimensional geometric shapes to verify or dispute specific hypotheses regarding the relationships of angulation to volume. They will use models to test ideas and present their ideas through a written report.

Science:

In their study of ecosystems, the students will be able to use what they have learned regarding coastal wetlands to predict the condition of a specific area on the coast of Georgia. Students will use primary and secondary sources and will present their ideas through a report that will describe the environment in terms of 5-, 10-, and 20-year conditions.

Social Studies:

In their study of proletarian revolutions, the students will be able to use examples from history to verify or dispute the proposition that all such events are the result of extreme social and economic inequities between social classes and that future revolutions may, therefore, be predicted. Students will use primary and secondary sources and present their conclusions

in a written and verbal report.

Multi-Disciplinary:

In their study of patterns, the students will be able to use what they have learned to verify or dispute the generalization, "patterns allow for prediction," using examples from literature, mathematics, science, and social studies, and will present their conclusions in a self-selected product.

(J. Curry & J. Samara, 1990, pp 1-11 to 1-12)

By extending the disciplines through the study of themes, teachers can assist students in identifying and understanding the complexities within a discipline. The study of themes responds to some of the characteristics of academically gifted students, including their propensities toward seeing remote associations, making new connections, and understanding the "big ideas" within areas of study. Management strategies for providing thematically based curriculum include:

(1) honors courses,
(2) seminars, and
(3) interdisciplinary units of study used within the regular classroom.

Conclusion

Historically, strategies of acceleration and enrichment have been used in order to differentiate content for gifted learners. While these strategies are effective in responding to some of the academic needs of these students, other student needs might be met by changing the complexity of the content area of study. Through the use of issues, problems, and themes, educators can increase both the complexity and the rigor of the curriculum.

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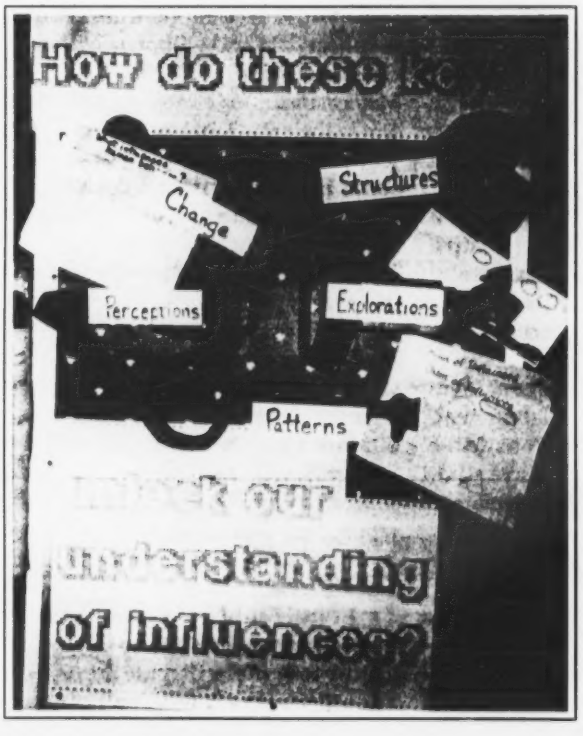

A thematic classroom for elementary students

Themes in Science: A One-Year Program for Grade 3

by Jacqueline Barber

Reprinted from the Spring/Summer 1991 issue of GEMS Network News, *published by the Lawrence Hall of Science, UC Berkeley*

3rd Grade
Processes
- observing
- classifying
- noticing and articulating patterns

Themes
- diversity & unity
- matter
- change
- interactions
- structure

6th Grade
Processes
- observing
- classifying
- noticing and articulating patterns
- experimenting

Themes
- constancy
- change
- models
- systems & interactions

8th Grade
Processes
- observing
- classifying
- noticing and articulating patterns
- experimenting
- relating
- inferring
- applying

Themes
- energy
- structure
- scale
- systems & interactions

This represents the third in a series of articles that have appeared in the *GEMS Network News*, describing how GEMS units can be sequenced to present a longer unit of study, unified by several recurring ideas, or "themes." A thematic approach to teaching is one way to address the common problem that teachers encounter – of there being too much material to present to students in a meaningful, digestible way. By presenting a smaller amount of material in more depth, while highlighting some of the recurring big ideas of science that weave through this material, we can help our students to see the "big picture." A glimpse of the "big picture" is not only tremendously satisfying, but it provides students with a framework to support lifelong learning about science.

The first article appeared in the Fall/Winter 1989 *GEMS Network News* and described a one-year GEMS program for Grade 6. A subsequent article appeared in the Fall/Winter 1990 *GEMS Network News* and described a one-year GEMS program for Grade 8. All three GEMS programs described in this series of articles can be modified for students a year or two older or younger. As described in the previous two articles, these one-year GEMS programs are meant to be models of how a teacher might knit a larger curriculum together using GEMS units, while keeping in mind the opportunities for process skill development and the larger themes that underlie these units.

Schools and districts that are well-organized may want to plan and coordinate so that even if each teacher chooses to present different material to her students, there is agreement on what processes and themes to emphasize at a particular grade level. Processes and themes can be selected so that they build from one year to the next, and provide opportunities for students to encounter a big idea, again and again, from different contexts and at different levels of sophistication. We have tried to model this with these three GEMS programs, to better illustrate this sort of spiraling approach.

Some of these connections can be seen in the chart to the left that lists the processes and themes each program emphasizes. Other connections are apparent as you read the three program descriptions and see how spirals occur within a program and between programs.

Of course, there are countless ways to sequence skills and themes to emphasize. For instance, we could have chosen to emphasize different skills and themes using the same sequence of GEMS units. Or we could have chosen to focus on an entirely different sequence of GEMS units and emphasized the same skills and themes. There's great fun and challenge in seeing and making the connections yourself. The curriculum program you plan will likely reflect your situation and interests, the objectives of your grade-level, school, district, and/or state guidelines, and the resources that are available to you.

In the third-grade year-long program, we chose to focus on the processes of observing, classifying, and noticing and articulating patterns. These skills are very appropriate for young students, and help build a foundation for all subsequent study of science. We selected the themes of diversity & unity, change, matter, structure, and interactions,* because those are the threads we saw that tied together our favorite GEMS units for third graders.

** For this grade level, we listed the usual theme of "Systems and Interactions" only as "Interactions," on the assumption that exploring "Interactions" in the early primary level is an excellent way to lay the groundwork for "Systems and Interactions" in subsequent grades.*

September

Animal Defenses is an enchanting unit that involves students in a dinosaur drama. Children add defensive structures to an imaginary defenseless animal. These now "defended" animals stand up to Tyrannosaurus rex, one at a time, as they show off their new defensive structures. In subsequent sessions, students differentiate between defensive structures and behaviors as they learn about the defenses of modern day animals. Predator/prey interactions become the focus as students describe (and differentiate between) the structures and behaviors that enable predator animals to seek

their prey, and the structures and behaviors that enable prey animals to defend themselves from predators. These activities provide opportunities for students to observe the various defensive structures that animals have, to classify them (those are claws, that's a horn) and to notice and articulate patterns (meat-eating animals have sharp teeth, prey animals often have eyes on the sides of their heads.)

October

Liquid Explorations enables students to explore the properties of liquids. The theme of diversity & unity is key as students observe many different liquids. They articulate what is the same about all of them and what is different. Students play a classification game to group liquids by their attributes, make a graph of their favorite beverages, and go on to classify liquids which are safe to drink and those that are not. Students learn that matter is the name for all of the "stuff" of the universe. Solids, liquids, and gases are the main forms of matter.

Students go on to investigate the properties of matter (liquids) as they observe how food coloring moves through different liquids, the shape of a drop of water and a drop of oil, and how some liquids mix and other don't. These investigations result in creating "secret salad dressing" recipes and an "ocean in a bottle." Again, observation, classification, and noticing and articulating patterns are central to this unit. Making a bowl of "spooky" punch for Halloween using dry ice and fruit juice is a festive way to end this exploration of liquids.

November and December

Involving Dissolving launches students into the study of dissolving, evaporation, and crystallization as they investigate the interactions between solids and liquids. Students dissolve eggshells in vinegar, create a "starry night" as salt crystals emerge on black paper, make tasty homemade "gel-o," and create colorful "stained glass" holiday window ornaments.

Students carefully observe and describe a solid and a liquid, and then predict what will happen when they mix them together. Through this and other activities, students observe firsthand as substances seem to disappear, or dissolve. They experiment with substances that dissolve in water and substances that don't. They observe things that dissolve quickly, and others that take a long time to dissolve (classification). They go on to discover that the substances are not really gone, as they observe the changes that occur to the liquids. Again and again, students are asked, "Tell me how the liquid changed," and they describe what they notice in their own words.

These engaging activities focus students on investigating the properties of matter, on the interactions between solids and liquids, on noticing change, and in observing the structure of crystals. Students also encounter diversity & unity as they consider how all situations of dissolving are the same and how they are different.

January

Fingerprinting is a great way to win your students' attention back after the holidays. Students use a simple technique to take their own fingerprints. They spend time observing and devising their own classification schemes for sorting fingerprints as they notice a pattern of similarities among prints. They go on to learn the official classification scheme used by Scotland Yard and use it to solve a mystery. Again students are launched into the notion of diversity & unity as they consider the similarities and variations of the structure of fingerprints.

February

Crime Lab Chemistry enables students to continue to sleuth out mysteries of science as they use the technique of paper chromatography to determine which of several pens was used to write a ransom note. Students focus on how the black ink changes as it interacts with the water and paper in the chromatography test. Extension activities lead students to doing chromatography art projects and writing their own resolution of the mystery.

March

Hide a Butterfly ushers in spring as children create a large mural of a meadow in blossom, make paper butterflies and bird-puppets to enact "The Butterfly Play," and learn about protective coloration. Students discover things about the structure of flowers and butterflies as they make and play with them. They role play the interactions between butterflies, flowers, and birds in the drama. Teachers can have students classify the flowers and butterflies they made (which butterflies are red, which are yellow; how many flowers have three stamens, how many four, etc.). Teachers can extend the unit to exploring the changes in the life cycle of a butterfly.

April and May

Buzzing a Hive is an extensive unit in which students learn about the complex social behavior, communication, and hive environment of

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TECHNET

JUMP THE PENMANSHIP HURDLE: KEYBOARDING

by Pat Lawrence

Do we sometimes assume that kids who talk well can automatically write fluently and competently? Only too often we may be frustrated by bright students who balk or fail to perform in writing tasks, even though they have excellent ideas and are very creative in other modes of expression. Have you ever asked your lone GATE student for a report, then wished for better results? Do you recognize the boy who cannot cope with penmanship, laboriously carving out symbols until he crumples the paper and refuses to go on? How about the child who has so many ideas, starts so many topics, collects research notes all over the place, but cannot organize them into a simple paragraph or essay? What can we do for the children who won't ever start a writing project, fearing that it can't be as perfect as they know it should be?

These children (like most adults) need the powerful tools available to us in word processing and text handling with computers. It is really far easier to help them succeed than it is to repair their damaged egos and recover lost opportunities. The tools needed are less complicated and less costly than ever, and you probably already have quite serviceable software and some computer access time available. (If you don't, then you really must mount a crusade to acquire some; here are some reasons to try.) The computer-aided writing process begins with keyboarding. These simple classroom procedures can work in a one-computer class or with lab access.

Modeling, Instruction

One of the most effective ways to help motivate and empower gifted reluctant writers is with keyboarding instruction. This will open the door to more fluent creative writing processes and useful publishing activities.

As early as second or third grade, students begin with a paper copy of a keyboard on their own desk, (perhaps laminated for durability!) Using a transparency on overhead projector, the teacher demonstrates specific fingering patterns, encourages the use of all fingers in standard positions; students imitate teacher's modeling on their desk-papers.

Keep it simple; show home row using all eight fingers, with "f" and "j" as locator keys or "home guides". As they touch and say key names "a-s-d-f— j-k-l-;(semicolon)," students learn key locations and hand positions. Lead the students through naming and touching all the rows and columns of keys. (Even if results are not perfect, this familiarity speeds up the hunt-and-peck process commonly used by elementary students.)

While spelling little words such as "dad, as, fast, go, love, luck, hit," students are led to see the patterns for each finger traveling in diagonal rows with pointer fingers reaching into the center to do double duty. As needed in their writing, the teacher shows the uses of space bar and return, delete and tab keys. Children make up other exercises, such as locating all the vowels, finding the alphabet in order, making up can-do word lists, and spelling names.

After several such five-minute sponge-type introduction activities, students continue on their own time, practicing with a partner in or out of computer lab. Practicing with basic high-frequency word lists used in reading enables the child to write all those words almost automatically. Keyboarding is a motor skill that is developed through rote practice; like penmanship, it should become transparent while thinking.

Practice, Benefits

Software available for extended, structured keyboarding practice includes *Key Words* from

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WRITING PARALLEL POETRY

by Carrie Millat

"Let's write poetry!" may intimidate your students. Here's a way to help them feel comfortable, using natural dialogue and prompted writing within word processing software. Using this technique of parallel or dialogue poetry, students can create unique pieces in response to all types of poetry.

Lesson Objectives: Students listen to poetry, respond to poetic expressions, discuss and practice dialoguing, describe their experiences with poetry, write and analyze how poetry is written.

Outcome: Students write a piece of poetry paralleling a poem read by the teacher; then they compose other parallel poems using a prompted writing frame created on the computer word processing program.

Teacher preparation: Moderate (to prepare prompts by entering poems.)

Lesson time: 1-2 weeks, mostly independent computer time

Environment: classroom or computer lab

Computer requirements: Apple II family

Software: *Magic Slate II, Bank Street Writer III, FrEdWriter; Children's Writing and Publishing Center*

Process:

Week 1

Choose a simple poem that you enjoy. For this example a Navajo Indian chant was used with fifth graders. After hearing it read and doing choral reading aloud, students discuss their feelings about the poetry; they share impressions and understanding of the poem. Talk about dialoguing as a natural, comfortable way to express ourselves; gifted students will enjoy the idea of communicating with a poet, of 'give-and-take' on a personal basis. Help students practice giving their own ideas orally in response to a line you read. Encourage them to express what comes naturally, not trying to 'figure out' or 'think up' a line of response.

After modeling this activity with a few lines orally, ask students to write their own personal response after you read a line. Our students (with some discussion and consensus building) responded to each line of the chant below with the line italicized on the right:

In the house of long life,	*My life from birth to death*
there I wander;	*I travel to the end.*
In the house of happiness,	*Happy is my place in life,*
there I wander.	*It will be with me always.*
Beauty before me,	*The future holds more awe,*
with it I wander;	*I do not know where life will take me.*
Beauty behind me,	*Memories of past beauty,*
with it I wander.	*May it stay with me always...*

Beauty above me, with it I wander;
Beauty below me, with it I wander.
Beauty all around me, with it I wander;
In old age traveling, with it I wander;
On the beautiful trail am I; with it I wander.

Carrie Millat is a 3-4 grade teacher in Santa Ana USD

WRITING PARALLEL POETRY

Week 2: Composing at computer

To introduce children to writing parallel poetry using the dialogue technique and word processor, use the planner feature and frame prompts of Magic Slate II. Display the text to a whole class using an overhead projector with a PC Viewer hooked to the computer, or have a small group gather around a monitor. Show the first line as a prompt; have students volunteer a line to enter in response. After writing a few lines of response, demonstrate how these first responses can be revised, edited and moved around. After the responses are arranged satisfactorily, remove the prompts, and print only the response poetry to screen or paper. See how well this stands alone as an original creation.

Using a teacher-prepared disk with other prompts from a variety of poems, each student may independently enter unique responses, save to disk with their own title, then print. Children share their creations with a partner for reaction and clarification, then they may publish or keep them in their personal portfolio.

Extensions, Alternatives

As students discuss the process and experiment successfully with writing, they mimic models and compare many styles of writing. Many teacher tools are available to help us with this complex process. The *WriteOn Series* from Humanities Software is an extensive collection of beautifully structured writing prompts. This comprehensive whole-language K-12 integrated writing/reading curriculum, with whole-language approach to literature-based writing, makes it easy for teachers and students to develop the art of communication. Directed by Jon Madian, author and poet, *WriteOn Series* content helps teachers meet individual needs and differentiate curriculum for all students. (It's also been made easy to fit your word processing software, hardware, and budget.)

Other early grade introductions to writing include Magic Slate's *I Can Write*, and Learning Company's *Writer Rabbit* (try the favorite, Silly Story Party). For later grades, Bank Street Writer III develops advanced editing and style techniques, with thesaurus and spell checker. Naturally, illustrating and publishing are motivating; thus the popularity of *Print Shop* and *Children's Writing and Publishing Center*. With technology's tools, you and your students will love the writing process.

Lawrence:
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Humanities Software. This excellent language-based system develops speed and accuracy, finger placement, and word processing editing skills. The short activities with fun language are naturally motivating; no "game" distractor is needed. Schedule students for 20-minute sessions, two or three times weekly, with a partner who simultaneously uses a paper keyboard and encourages proper finger placement and no-peeking at keys. With this good-natured peer/self-monitoring and computer-managed progress feedback, GATE students develop reasonable keyboard proficiency in about three months.

If students are already using a computer for games or to write simple cards, banners, and essays, they are forming habits, good or bad. By directing their efforts toward efficient keyboarding, not waiting for formal typing courses in junior high school, we help students make the most of available time on computers. Gifted students enjoy this multisensory learning; saying letters aloud, seeing words in regions, and communicating without the ordeal of forming letters. They also feel empowered with new tools used by adults. Gifted youngsters like the autonomy of private practice and self-monitoring growth; with some encouragement and modeling they thrive.

Some teachers have students practice entering text by copying previously written compositions onto a computer to be printed. This allows children to develop the mechanics of word processing without having to conjure up content. This is justifiable as practice in keyboarding and word processing skills, but is only preliminary to the "writing process."

Two good activities help develop fluency for writing ideas: invisible writing (with the monitor turned dark until thoughts are completed) as described by Steven Marcus, and telegraph writing developed by June Dodge. (Monitor cables are switched between computers so the writer sees and replies only to what a computer partner has written.) Students concentrate on writing rather than editing; they make corrections only when the need for clarification is seen.

We hope you will discover the motivation and success possible in developing the Writing Process with a computer. The lesson plan in this issue is geared toward elementary grade use, but could be applicable at any age. Readers are invited to share their experiences and favorite applications with TechNet readers. If your students already use computers regularly for writing, or any subject, please write us and share your expertise.

CALENDAR OF EVENTS

Fall CUE Conference
Oct. 31 - Nov. 2, 1991
Santa Clara Convention Center
Santa Clara, CA
For information:
CUE, Inc.
4655 Old Ironsides Drive
Santa Clara, CA 95054
or Gloria Gibson, 408/492-9197

Orange County
Computer Using Educators
Technology Festival
Saturday, November 23, 1991
Serrano Intermediate School
24642 Jeronimo
Lake Forest, CA
(Saddleback USD)
Driving south on I5 or 405 exit at Lake Forest and turn left. Turn right on Jeronimo 1-1/2 blocks to school.
For information call:
Linda Smith: 714/586-1234 X 349

Let us know about technology conferences in your area. Information should be received two to three months before the conference date.

Product Information

Inclusion of names or descriptions of software and/or hardware products in this publication is for information only. It does not imply endorsement by TechNet editors or the California Association for the Gifted.

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Let's Hear It from the Teachers . . .

Thematic Instruction

by Cynthia Ratzlaff

Recently I had the pleasure of receiving ten letters from some of my former third grade gifted students at Bennett-Kew Elementary in Inglewood. They are now fifth graders at a nearby campus. Some thanked me for making third grade fun, others liked the way I let them have debates in class, many mentioned the wonderful literature we had read. But the one thing most remembered was how they learned to look for patterns everywhere around them. One student even mentioned how she could remember the time she discovered that all her school subjects could weave together to make a pattern. Two students vividly recalled "the pattern lady," as they dubbed Eileen Swartz, then the facilitator for the GATE program in Inglewood schools. She taught several creative introductory lessons on the theme of patterns in my classroom. The effect of our thematic instruction was evident and gladly received in these letters.

I was first introduced to the thematic approach in the summer of 1988 when I had the opportunity to attend seminars and workshops developed by Dr. Sandra Kaplan at the USC Teacher Training Institute for teachers of gifted/talented and highly able students. I have been successfully using the techniques with my gifted third graders ever since. I use the theme of patterns to integrate the disciplines and develop creative and abstract thinking. Using key words and generalizations about patterns, the students learned to gather information about any subject, apply it to the generalization, analyze it, prove the generalization, and move from the concrete to the abstract and vice versa. I have found the theme of patterns especially effective in implementing the current California State Framework whose elements are already integrated according to topics. Differentiating the already thematic-based curriculum to fit the needs of gifted students precipitates naturally and easily.

One generalization about patterns that my students especially like is "patterns are made up of elements that are repeated." This year my students developed wonderfully creative products. For example, when applying the generalization to literature, students developed charts to show repeated themes such as survival, love, friendship, parent-child relationships, etc. They also made charts to show that there was a problem/goal/event/solution pattern in other literature books they read. In science, they made models and drawings to prove how elements are repeated in the phases of the moon, the orbits of the planets, and the seasons on earth. As we followed the Gulf Crisis, the students researched other wars and observed, graphed, and listed the similarities and differences. When my students were introduced to poetry writing and understood the powerful effect that repetition can have in poetry, they integrated information learned in other disciplines to create original and very insightful poems. On the next page are three examples: one integrates science, one social studies, and one the world and the poet herself!

For me, the thematic approach is an effective vehicle for teaching the things that I know. For the students, it becomes a vehicle to go beyond what is taught to a greater understanding and use of their own potential. For all of us, it is motivating, challenging, and fun. It just plain makes good sense.

Cynthia Ratzlaff has taught at Bennett-Kew Elementary School in Inglewood for 13 years. She holds a BA degree in Archeology from Rutgers University in New Jersey.

The Boy and King of Jupiter

I am the boy and king of Jupiter
The boy who will never die.
The boy who lives on and on.
The boy of Jupiter.
The boy who is large in size.
The boy who sees the earth and its beauty.
The boy is me and will always be.
Everybody loves my planet and its beauty.
But the only thing is I have no air for people to breathe.
I am a cold planet moving around in wide open space.
The boy and king that is cold and red.
This king has a big bright red spot and a giant ring.
This boy doesn't even sing.
This boy and king is not as hot as Mercury.
This boy is not the right temperature as Earth.
This boy will never ever sit down.
This king and boy has no people on it.
This king and boy would very much like to sing.
This king and boy is so very big and courageous.
I am the king and boy of Jupiter.
This king can see the sun
And see that we are one.

Rene Gomez

The Desert Storm

About five weeks ago on the news, I heard it.
People ask me, I tell them.
I've heard about the storm.
But it's not a regular storm.
It's a fighting storm.
And it was started by a man named Saddam Hussein.
He is a very crazy man
Because he started a lot of shots.

Some people say
that sending our boys away
is just like rolling a tire down a hill.
You roll it and you don't know
If it will ever come back to you.
But, oh soldiers, please come back
Because we can't stand to see you
Dead in a stack.
So, oh soldiers, do please come back
Because we don't want to see you
Dead in a stack
With a bullet in your back.

Gregory Wells

I am the Girl

I am the girl of wisdom
Yes I am, yes I am.
I am the girls of the planets and space.
I can float like a balloon.
I can float,
Yes I can.
I am space,
Yes I am.

I am the girl of the soldiers
And I can feel how the soldiers feel
Oh, yes I can.
I am the girl of cities and seasons.
I travel through the sea.
I am the girl of the lakes and swamps.
Do you feel this way too?

I think I can be the world.
I wish I were the world.
I am the girl of love.
I am life.
Aren't you?

Safiya Hinds

These poems were all written by third graders under the direction of Cynthia Ratzlaff, teacher, at Bennett-Kew Elementary School in Inglewood USD. ***See article on page 23.***

Let's Hear It from the Teachers . . .

Concept Themes: An Umbrella for Learning

by Donna Denham

It has given them a hook to tie their work together.

It raises expectations for all students.

It helps students realize that what they are studying relates to the past, present, and future.

My students take more pride in their products. They have ownership.

When you're working with generalizations, you are forced to make connections among the disciplines.

If you had been in attendance at our monthly GATE networking sessions, the above are comments that you might have heard. Because of their personal and professional commitment in developing the Visalia Unified School District's GATE curriculum, teachers' excitement and enthusiasm has grown over time.

Approximately two years ago the GATE Parent Advisory Board suggested that a GATE curriculum be developed for our elementary schools. Visalia Unified is a school district of approximately 13,000 elementary students. The plan was to develop a curriculum that could be used in all schools and with all student populations. Visalia's 486 GATE students are either clustered in classrooms or enrolled in a GATE Alternative School.

The summer of 1989 found the GATE Resource Teacher and two GATE Cluster Teachers traveling to southern California to receive training in thematic teaching. As we learned more about the conceptual/universal theme idea, we thought about how it could be applied to our particular situation...serving some classrooms with one GATE student and other classrooms with as many as 15-18 GATE students. After trying out various ideas in a fifth and sixth-grade classroom, we gathered twenty-five 2nd– 6th grade teachers in the summer of 1990 to develop a GATE curriculum to suit our needs.

After thoroughly examining the state frameworks, we decided to select themes and generalizations for each grade level. We evaluated themes that would enhance and complement the content at each grade level. Each of these selected themes serves as an "umbrella," under which many related concepts are clustered.

Second Grade .. Systems
Third Grade .. Change
Fourth Grade .. Influence
Fifth Grade .. Exploration
Sixth Grade .. Power

Teachers at each grade level selected 4-6 generalizations. The generalization is the "big idea" which leads to the learning of facts. It gives meaning to the facts or topics. Content is then developed spanning many disciplines.

During the week-long session, teachers met in grade-level groups to outline connections among district objectives, state frameworks, and their grade-level theme.
For example:

Theme: "Power"
Generalization: Power intoxicates; it inspires.
Learning Experience: (3 or 4 for each generalization – lasting 3-4 weeks)

Using appropriate student-and teacher-selected literature (including songs and poems), hypothesize how power has influenced characters. Present this in the form of an illustrated brochure, debate, role play, or student-selected, teacher-sanctioned product.

Through activities, assignments, and interdisciplinary research centers, students gathered information relevant to the generalization. During the course of the academic year, the teachers involved in this project met once a month to discuss and modify the summer plan. The networking among the participants became one of the unexpected strengths of the program. Future plans include the development and refinement of the existing curriculum and the inclusion of more teachers in the process.

Donna J. Denham is a K-6 GATE Resource Teacher in Visalia Unified School District. She may be reached at 315 E. Acequia St. Visalia, CA 93291

Let's Hear It from the Teachers . . .

Big Ideas for Little Children

by Sandra Brookshaw

Do bugs have bones?

How many stars are in the sky?

How does a beaver know how to build a dam?

What causes surf?

How do we taste things?

These are the types of questions preschool and primary teachers are asked daily. Try answering one of these questions in terms an early age child can understand. It's not an easy task. The young child has an insatiable curiosity, an innate desire to explore, a high energy level, a relatively short attention span, and the desire to be independent. They often say, "I can do it myself!" As educators, we need to establish an environment wherein students can discover answers to their many questions about the world around them.

In a thematic-based learning environment the early age child can research, discover, and draw conclusions about the theme from a variety of teacher-directed and self-selected topics. The young child must observe, manipulate, and construct real objects, or models of real objects, in order to draw conclusions about the generalizations presented by the teacher.

Let's assume that "Structures" has been established as a thematic base to integrate all areas of the curriculum. The classroom needs to be organized with a variety of learning centers that allow students to test basic generalizations about structures. Possible centers might include Technology, Numbers, Architecture, and Structures Found in Nature.

In a directed lesson the teacher defines terminology necessary to guide research focused on this theme. Following are examples:

Structure

1. Anything that is built, e.g. house, bridge
2. An arrangement of parts, or the way parts are arranged, e.g. plant cell, skeletal system

Natural structure

A structure that is repeatedly reproduced by natural forces

Imposed structure

A structure that is created by animal or man

Incongruous structure

1. A structure made up of inconsistent parts
2. A structure not consistent with what is correct, proper, or logical: unsuitable, inappropriate

Architect

1. Master builder
2. A person who designs buildings and supervises their construction

The students discover facts about structures by making observations or discoveries at the various centers. Through teacher-guided discussions, children can draw conclusions and make generalizations about structures based on facts they have discovered. Or conversely, the may teacher present the generalization and challenge the students to discover facts that support the generalization. Some generalizations the teacher may want students to discover about structures include:

- Structures are built to satisfy needs.
- Structures are made of parts.
- Structures are named and classified in different ways.
- All structures work in different ways.
- All compositions are structures (art, music, writing).
- Living structures reproduce themselves.

Once the environment has been established, the research terminology introduced, and a generalization suggested, the children are sent to work. Let's assume students are working to prove the generalization, "Structures are made of parts." At the archeology center students dig through sand and discover parts of a broken dish and then attempt to reconstruct the dish. Blocks, tangrams, pentominoes, and construction materials can be used to build a new structure. Complex machines can be examined to detect component parts. Appliances can be taken apart and pieces analyzed. These hands-on activities allow students to discover facts about structures first-hand and to draw conclusions. Students can then transfer their information to a new situation.

You have given them the tools to examine their world in more global terms and to test their assumptions. Thematic-based instruction gives students the opportunity to grasp "Big" ideas and make learning more relevant to their interests and their lives.

Sandra Brookshaw is the GATE Coordinator in Las Virgenes USD. She can be reached at Las Virgines USD, 30961 W. Agoura Rd., Suite 100, Westlake Village, CA 91361

Let's Hear It from the Teachers . . .

The Use of Systems to Solve Problems

by L. Ernestine Fields

The voices in the courtroom became quiet as members of the jury filed into the jury box. The judge asked the foreman of the jury if a decision had been reached. Replying that it had reached a verdict, the foreman stated that Goldilocks had been found guilty of breaking and entering the house of the three bears, along with the unlawful taking of food and the unlawful use of the bears' beds. The audience clapped in approval. Thus, some of the components of the legal system, identified on a classroom bulletin board, became "reality" to the children.

The curriculum for these six, seven, and eight year olds provided an opportunity for the children to analyze the elements that comprise these systems: transportation, communication, political, biological, legal, environmental, and human. Students who wanted to find out about even more systems were given the opportunity to learn about the sewer and postal systems within the city.

For each of the systems a center was created. Each center had a bulletin board identifying elements of the system. Included in each center were appropriate realia. Then, as the children finished various related tasks, from art to arithmetic to language arts to construction, their work was displayed in the same center, thus reinforcing the concepts presented by the teacher.

For example, the bulletin board for the legal system included a picture of Justice holding the scales of justice. This was in turn surrounded by vocabulary and pictures concerning the legal system: pictures of a courtroom, a judge, legal briefs, law books, and statute books. Later, the children constructed their own briefcases and these were, in turn, mounted on the same bulletin board.

By engaging in dramatic play, i.e., conducting a trial, the children were given an opportunity to experience group dynamics. This was vividly illustrated when a member of the jury for the *Three Little Pigs* became outraged when the audience groaned at the verdict concerning the guilt of the three pigs. This child's emotional response provided the entire group with a "real life experience" in responding to mass hysteria. The ensuing arguments between the disgruntled child and certain members of the class called for "order in the classroom" and a discussion of how mature people handle disagreements. Certainly, the "elements" of group interaction were addressed within the context of learning about the legal system.

Thus, within each system studied, various parts were identified and activities were presented which enabled the students to experience a part of the system. In communications, an early hand-operated radio was provided for the children to operate; in transportation, a vintage Ford roadster was brought on campus and later, a class roadster was made and moved around the classroom; for the postal and sewer systems, a mural was created to show a city's postal and sewer systems at work.

The culmination of the study of systems was the creation by the class of a system whereby the class could provide the entire school population with a school bulletin. Through group discussions various goals were met: the purpose of the bulletin was decided, jobs were defined and assigned, and the methods of accomplishing the tasks were designed.

Entering the classroom during this experience was exciting. Some of the children were drawing pictures, others were writing copy. Soon, there was an assembly line of students stapling the various pages of the bulletin together. Lively music was playing in the background to help keep the pace of the assembly line steady, a concept learned through exposure to information about Henry Ford's innovative methods. Then, the bulletins were counted and distributed to the other classrooms. Each group responsibly cleaned up its work area and when ready, each child received a copy of the school bulletin. The class was ended. And, in their hands, the children had an example of what could be accomplished by creating a system that worked. Hopefully, the children's ability to solve problems was enhanced through their knowledge of, and experience with, systems.

L. Ernestine Fields is an attorney, who formerly served as a UCLA Training and Demonstration Teacher and a teacher at the USC-NLC Teacher Center.

Let's Hear It from the Teachers . . .

The Key to Connected Learning

By Violet A. Henney and Nora E. Woods

Editor's note: The authors assume that the teacher has one classroom not shared by other teachers or classes.

Gifted children are not different, but they differ; therefore, the classroom environment and learning experiences must differ to ensure that the needs of these students are met (Kaplan 1990). In order to create this total learning environment, teachers would be wise begin with a universal theme.

People are drawn to themes everyday in some aspect of their lives, whether it be the theme song in a movie, the theme of a good book, or the theme for a party. It is no wonder, then, that a theme is an essential part of a differentiated curriculum for gifted and talented students. It is the "heart" of the curriculum, and without it all learning is fragmented. It enables us to lock together what we "have to teach" and what we "should be teaching."

The theme used in a differentiated curriculum is one which is broad based and can relate to all areas of study. It is not a unit-based theme, such as "fairy tales" or "dinosaurs." The theme must be a universal idea such as "influence," "order," "change," or "beginnings." The theme must be open-ended; for example, if it were "dinosaurs," students would learn only about dinosaurs. The focus of learning being narrow would restrict their learning in related areas. If the theme were "influences," however, the students could find out how dinosaurs have influenced our environment or how scientists of today have been influenced by the findings of prehistoric fossils. From the study of influences, students learn not only about dinosaurs, but how to connect influences to a multitude of other ideas.

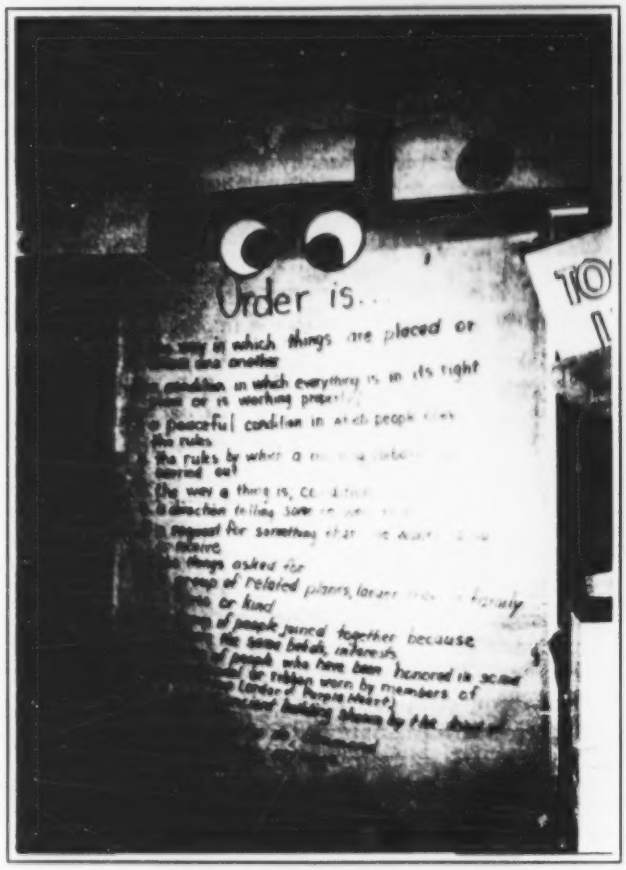
It takes time to fully understand a theme, and we feel that one theme should be completely developed during a school year. Although some districts may consider using a theme for six weeks or a semester, we have found it more effective to study only one theme in each grade level per year. This allows students to internalize their understanding of the theme. One of the best ways to ensure understanding is through room environment.

Developing a room environment around a theme begins the first day of school. Captions and prompts help students express ideas in more scholarly ways. One successfully used prompt is "I assume _____ because _____," which encourages students to make assumptions based on observations. Another is "I challenge _____ because _____," teaching children the value of using factual information to support their statements in group discussions. Finally, students practice quoting factual information beyond their scope of personal knowledge by using the prompt "According to _____."

The theme must be displayed in a spectacular fashion so that it is immediately recognized when students arrive. An excellent way to introduce the theme is to brainstorm possible meanings of the announced theme. Thematic definition should be displayed in the classroom because it can be used as a reference for clarification of multiple meanings. Relating the theme to the students' lives at home, in the community, and at school is also useful for building understanding of the relevance of the theme. Emphasis should be placed on the study of the particular theme rather than on isolated subjects. Incorporate the theme into lessons whenever possible. The environment should be built throughout the year around the theme, rather than around seasons or subjects.

Since our curriculum is open ended, students add to their class products all year. By year's end the room environment should reflect the culmination of all learning experiences.

The products found in the learning environment come from lessons which prove or disprove generalizations. A generalization is a



big idea with a broad meaning, inclusive of the theme. Generalizations are abstract, open-ended statements that foster an understanding of the theme. Throughout the year students research a chain of generalizations which link the theme, using both inductive and deductive reasoning.

Learning experiences are the keys that unlock the understanding of generalizations which are continuously linked by a theme:

Thinking Skill + Content + Research Skill + Basic Skill + Product (T/S+C+R/S+B/S+P)

Note that the formula does not equal the product; instead, the product is an integral part of the learning experience. In the learning experience the student is given the opportunity to acquire knowledge (content) by developing skills or processes and communicating through products. Students are taught in an interdisciplinary manner incorporating learning experiences which provide more advanced, complex ideas. Every discipline offers research opportunities to students. Research in science includes observing, experimenting, and recording. In math, research involves observation and manipulation of numerical ideas. Research can also connect historical studies, causal relationships, and discipline studies. We conduct research by reading, listening, and writing.

Through the learning experience we incorporate critical, creative, and logical thinking skills, as well as problem-solving skills. Students are given opportunities to communicate verbally, tactilely, and through illustrations. Then they develop presentation skills so they can share their information.

The learning experience *(T/S+C+R/S+B/S+P)* helps build an understanding of a generalization and theme such as "Order can result in harmony or stimulate conflict." To build this learning experience, we must begin with a basic skill or essential element, as this is what must be taught. For example, in a lesson which extends from the social studies discipline, the formula could include the following:

- *T/S = Make causal relationships*
- *C = Negative and positive influences which affect the order in cities*
- *R/S = Recognize and use graphs to interpret population changes in cities*
- *B/S = Identify multiple causes of events in communities*
- *P = Panel discussion to identify ways adversity or harmony affects the order of cities.*

For a more extended learning experience, the same formula can be applied to an "extended lesson" which might include:

- Identifying multiple causes of events during three different time periods.
- Gathering data and creating a time machine indicating the results of each war in relation to the economics and technology of the time.
- Writing newspapers of the time period to illustrate that order can end in harmony or stimulating conflict.

By developing a room environment around a universal theme and using learning experiences to understand generalizations, teachers will have provided a basis for a differentiated curriculum for gifted and talented learners.

Nora Woods and Violet Henney are teachers of third-grade gifted/talented students at Clark Elementary School in Laredo, Texas. They have participated in an International Curriculum Project since 1989. In October 1990 they spent two weeks teaching in Russia under the guidance of Dr. Sandra Kaplan.

Thinking Blocks for Literature

by Stephen Marcus

Effects of Power	High/Low Human Nature	Individual vs. Society
Accep-tance	THEME	Freedom vs. Responsi-bility
Growing Older	Tolerance	Tradition

Figure 1

Treats Others	Identity	Ten Years Later
Nurture	CHARAC-TER	Allies
Enemies	Power	Nature

Figure 2

The Problem

Your students have a problem. They are faced with the task of trying to figure out what to say about a work of literature they are studying in class. This entails figuring out what to think about it. If they are typical students, many of them have begun to develop thinking blocks at about the same time you have finished giving the assignment.

A Solution

A device for helping students deal with their thinking blocks is described below. Used by teachers and students around the country, it involves transforming a Rubik's Cube-type puzzle into a tool for thinking and writing about literature and demonstrates the transition from thinking block to Thinking Block. The method encourages a certain kind of intellectual dexterity, zest, and fluidity of form – in other words, a kind of mental break-dancing. The point is to give yourself a "whack on the side of the head" (or, if these metaphors are too percussive, a whispering kiss from the mists of imagination).

The Method

A Rubik's-type cube has six sides or perspectives. On each side there is a small center square (or "tile" in the Rubik's Cube world), surrounded by eight additional tiles. I picked one of those sides and defined it as the THEME perspective. I then selected eight common themes that are likely to occur in any novel or short story. Using adhesive paper, I labeled the center tile "THEME" and put a different theme on each surrounding tile on the THEME side of the cube (see Figure 1).

I had previously noticed that most works of fiction deal with people, so I defined another side of the cube as the CHARACTER perspective and thought of eight questions you might ask of any character in a work of fiction. The CHARACTER side of the Thinking Block is shown in Figure 2.

The other four faces of the block were defined in terms of the author's METHOD in creating the work of fiction, the kind of WORLD that exists in the story, the role of CHANGE in the plot, and the relationship between the READER and the work of fiction being studied. These perspectives are shown in Figures 3 - 6.

The Practice

Here's how the Thinking Block works. Suppose you want to think and write about *The Red Badge of Courage*. First, you pick a perspective on which to focus – the theme of the novel, for example. You take hold of your Thinking Block and give its rows of tiles several twists – five to ten are usually sufficient. You then locate the center tile that contains the word THEME and note the random collection of tiles that now surrounds it, tiles that represent questions drawn from the other five perspectives. Your task now is to ask yourself each of those questions and to relate them to each other and to your book's theme.

In one case, the eight tiles that turned up around the THEME center tile dealt with Fate, Exposition, Stays Same, For

Deduc-tion	Induc-tion	Narra-tion
Point of View	METHOD	Compare with Others
Exposition	Drama-tization	Interior Mono-logue

Figure 3

Chance	Fate	Justice
Irony	WORLD	Choice
Happy	Unhappy	Law

Figure 4

Change, Tolerance, Ten Years Later, Choice, and Need to Know. Here is one set of questions that can be generated from this collection of tiles:

- In *The Red Badge of Courage*, to what extent is the world of the novel controlled by fate and to what extent by free choice?
- Who and what stays the same, and what's the relation between lack of change and the kind of world it is in the terms just considered?
- Who is personally trying to change, or to change others or situations?
- What's the relationship between these attempts and the kind of world it is?
- How is tolerance a factor in all this?
- Speculate on what all this may mean for one of the characters ten years after the story ends.
- To what extent do you find answers to these questions from what the author tells you (as opposed to shows you)?
- And, which of your answers to these questions can you weave into a statement of what *The Red Badge of Courage* is "about"?

If some of these questions don't seem to be working out, give the cube a few more twists. Depending on your personality, it may be comforting or disconcerting to know that there are some 42,000,000,000,000,000,000 (42 quintillion) arrangements of your cube – and you have only been examining one side of one of those arrangements.

Never again can your students bemoan, "But I don't have anything to write about!"

What the Thinking Block does is allow you to do industrial strength clustering, or power sentence combining. It may not be possible to interrelate all the questions that turn up around the selected central perspective. The goal is to try to relate them – and in the course of doing so to try to develop new ideas and insights.

The Theory

The Thinking Block method is embedded in the following deeply superficial model of the thinking process. Start with the notion of a "thinking process" analogous to the composing process: that is, prethinking, thinking, and rethinking. (It's hardly necessary to point out that these represent recursive stages.)

Prethinking includes making the implicit explicit. On a given topic we can generate, record, and note the prejudices, facts, feelings, values, speculations, etc., that we already possess. We might also engage in some research to acquire more of such material. The Thinking stage consists of the application of heuristic procedures that provide us with a "whack on the side of the head." It is in the Thinking stage that we try new perspectives, new angles. It is here that we engage in creative thinking – making the familiar strange and the strange familiar. The Rethinking stage derives from attaching the prefix "re-" to almost any apposite word: reformulate, reconsider, reaffirm, review – rethink. It's in this stage that we can feel free to change our minds – if we think we should – and to articulate those changes.

As in the case of the composing process, some people confuse earlier stages with later ones. They attempt to do their rethinking before their prethinking. They mistake confirming their prejudices and assumptions with examining them. Others indulge in compulsive rethinking. This often leads to thinker's block and is especially troublesome when approaching the deadline for a paper or book manuscript.

Stays Same	People Indifferent	Forces Against
Forces For	CHANGE	Gains Ground
Loses Ground	People Against	People For

Figure 5

Surprised	Learned or Relearned	Need to Know
What I Know	READER	Left out
Still Applies	So what?	No Longer Applies

Figure 6

It's also the case that these stages don't begin to capture the complexities of the process under consideration. On the other hand, by suggesting a focus on the process of thinking, the stages encourage the development of teaching strategies appropriate to each.

This discussion only begins to explore the utility, and limitations, of this model for the thinking process. Suffice it to say that its main virtue is that it helps us think about thinking – and, if not more importantly at least more practically, such a framework helps us generate and structure our efforts to focus on process as well as product.

The Thinking Block is most useful during the Thinking stage of the thinking process. While a traditional Rubik's Cube-type puzzle has a drive toward order (i.e., getting all the tiles of one color back to the same side), the Thinking Block has a drive toward randomness. The point is to create an unexpected grouping of elements and to use our own abilities for constructing meaning to bring order out of "chaos." The Thinking Block also illustrates in a concrete way that, even though we are considering the elements of one perspective, there are all those other elements just waiting to be brought into the picture.

Thinking Blocks Across the Curriculum

The particular questions (and tile labels) provided above are obviously arbitrary. Different central perspectives could have been chosen, and other questions could be substituted. The important feature is the mechanism. Realizing this, it is clear that Thinking Blocks can be created by teachers and students for other English and language arts areas, other grade levels, and other disciplines.

As usual, however, the implementation of a bright idea is never as easy as expected. Experience in training workshops designed to develop other kinds of Thinking Blocks suggests that participants can use guidance. Center-tile topics must be at the right level of abstraction. Surrounding-tile questions should be sufficiently open-ended to encourage the kind of cross-pollination that is at the heart of the whole approach.

The very enterprise of developing a Thinking Block is, however, an enriching and rewarding experience. This was certainly the case for two social studies teachers who decided to develop their own Thinking Block for History. They first had to consider common dimensions of historical events, deciding tentatively on the following: PEOPLE, IDEAS, HABITAT, PLACE, and ECONOMICS. Their continuing efforts to refine their topics and accompanying questions have provided them, their students, and their colleagues with quite a valuable "new look" at how their discipline is conceptualized and organized. The stages of developing a Thinking Block have themselves provided occasions for thinking and writing about history.

Brief Conclusions

Even though the Thinking Block "breaks down" ideas about literature into bits and pieces, the Block itself is an integrative and synthesizing device. It's a concrete metaphor and reminder of the richness and complexity of literature. The work under consideration is clearly about both what is on the Block, and even more what is absent from it.

The Thinking Block, in fact, allows and encourages students to constantly "redraw" their mental map of a work of literature. It evokes "alternative itineraries" through the landscape of the text. And it does this

with a cultural icon that connotes both problem solving and "play." The Thinking Block is also an antidote for those people (like the author) who could never solve a Rubik's Cube in the first place. "Solving" the Thinking Block is the last thing you want to do.

The Thinking Block for Literature is on one level merely a three-dimensional version of "take one from column A, one from column B," etc. In practice, however, it has proven at a variety of grade levels, to be an engaging and intriguing challenge for teachers and students who like to play with ideas and who enjoy having a concrete and colorful way to represent them.

Stephen Marcus, Ph.D., Associate Director, South Coast Writing Project, University of California, Santa Barbara, CA 93106.

A Note for Computer Enthusiasts

The Thinking Block is a method for organizing, storing, and retrieving information. As such, it is a "data base" (as is any dictionary or novel), and was, in fact, developed in the course of creating more traditional data base files for thinking and writing about literature. It should be clear from the discussion above that the Thinking Block is thus both a data base and thought processor. It has 42 trillion megabytes of RAM and a high-resolution, interactive digital-kinetic interface. Its neural-wetware operating system is compatible with all known brands of commercial hardware. There is already a large installed base of uninitialized Thinking Block hardware in the United States, and thus the Thinking Block system is readily available as a very low-cost peripheral device for English classes. It is advised, however, that third-party developers exercise care in keeping the sticky paper from slipping into the drive system.

Barber:

Continued from page 18

the honey bee by making paper bees, a bee hive, flowers and pollen, and bee predators. These activities are rich with opportunities for students to observe, classify, and notice and articulate patterns. Students focus on the structure of a honeybee and the hive. They explore the changes in the life cycle of a honeybee. They study the interactions between bees and flowers as well as between bees and their predators. A teacher can ask students to compare the ways in which butterflies and bees are similar and the ways in which they are different, again illustrating the important theme of diversity & unity.

June

Bubble-ology is a great way to celebrate the end of the year. Your students can't help but to stay on task as they participate in several of the activities in this unit. In "Bubble Technology," students test and then classify varied materials according to which work to make bubbles and which don't. In their own words they describe the ideal structure for a bubble blower that makes enormous bubbles. In other activities, students observe the color changes on a bubble and look for patterns to predict when a bubble will pop.

As should be evident from the above, even though the educational reasoning for the thematic approach and its components may seem advanced or complex, the concrete experience that students gain by encountering a theme again and again, from different disciplines, and in different contexts, helps them build a deeper understanding of several major ideas in science.

After participating in a program like the one described above, a primary age student may not learn a specific category, such as diversity & unity. But she can come away knowing that you can look at the world and see the ways in which things are similar or part of a whole, the ways in which they are different or separate. Even if a young student is focused on just part of a big idea, such as the interactions aspect of systems and interactions, he will come away prepared to understand more about systems and interactions in the future.

By using underlying thematic constructs to bring together a lively series of activities that give your students a sense of fun and excitement, while introducing them to skills, concepts, and themes, you help pave the way for learning about science and mathematics in grades 4, 14, and 44. You no doubt have many other favorite activities for early graders that could be woven together in a similar way. Over the next several years, a number of new GEMS guides, in both mathematics and the physical sciences, are planned for these grade levels, which should allow for even greater flexibility in meeting the needs of kindergarten and early elementary students.

Above all, a curriculum that embodies a thematic approach enables us to get past "activities for activity sake." It allows for a more thoughtfully organized, and in the long-run a more beneficial, construction of ideas for students.

Younger Scholars: An Outstanding Opportunity for Summer Research

by Leon Bramson

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When I began my project, I expected to become an expert on the Indianapolis treason trials of 1864 and on the constitutional implications of the Supreme Court's decision on the Milligan case. I did accomplish that end, but I also was able to see from a first-hand view the interrelation between a state and national history and between state and national legal issues. As a high school student, I have always seen history recorded in one textbook. By looking at what many historians, legal writers, and political scientists had to say about my topic. I saw how a single set of facts and events could be interpreted in different ways and with different kinds of emphasis.

This is what Lewis J. Wertheim of North Bloomington High School in Bloomington, Indiana, had to say at the end of a summer of research. Lewis, who was a sophomore, had won a Younger Scholars award for work during the summer of 1987. The result of his work has been published by the *Indiana Magazine of History* in its September 1989 issue. The article, "The Indianapolis Treason Trials, the Elections of 1864, and the Power of the Partisan Press," is but one of the many projects conducted by high school students all around the country since 1984. Both high school and college Younger Scholars have written on a wide variety of topics in history, literature, philosophy, and other humanities disciplines since the program was started.

The deadline for applications is November 1 for the following summer.

High School Younger Scholars awards are made to secondary school students and are for $2000, which includes $400 for the faculty project adviser who works with each Younger Scholar. Award recipients are expected to work full-time for nine weeks during the summer, doing research and writing a paper under the close supervision of a humanities teacher/scholar. Although no academic credit may be sought for these projects, students frequently use them as springboards for further work. (College Younger Scholars, which is a separate competition, receive grants of $2400, of which $400 is for the project adviser.) Projects must be in the form of a research paper and firmly grounded in one or more of the humanities disciplines.

In the act that established the National Endowment for the Humanities, the term *humanities* includes, but is not limited to, the student of the following disciplines: history; philosophy; languages; linguistics; literature; archeology; jurisprudence; the history, theory, and criticism of the arts; ethics, comparative religion; and those aspects of the social sciences that employ historical or philosophical approaches.

While not all Younger Scholars publish the results of their research as Lewis Wertheim did, many of them do manage to disseminate the results of their work through lectures and informal talks as well as in printed form. The main thing is, however, that winners of these grants have an unprecedented opportunity to devote themselves to research and writing on a full-time basis. For most of them, it is the first time that they will have had an opportunity to find out what scholarship is really like. It is remarkable how many Younger Scholars winners report that the experience has changed their views of their own future.

One junior classics major at Brown University wrote in his final report in the fall of 1987:

This, perhaps, is the most important result of my summer research: I have seen the way a scholar works, and I am convinced that I am ready to devote myself to such a life.

While not all Younger Scholars emerge from the summer's experience with such strong feelings, many do find greater self-discipline and love of research as a result. A junior at the Central University of Iowa in Pella, who had worked in a factory during the previous summers, received an award for research on the "Influences of Shakespeare on Whitman's *Leaves of Grass*." Reflecting on his summer experience, he wrote:

Leon Bramson is a program officer with the Division of Fellowships and Seminars of the National Endowment for the Humanities in Washington DC.

I was able to learn a great deal about both Whitman and Shakespeare that I had never had the chance to learn in all my classes. This of course, is an expected outcome of any intense study of an author or authors, and I am not surprised by this fact. I am, however, surprised by the fact that I learned such a great deal about discipline! Being, in essence, my own foreman, I was able to disobey orders much more readily than if I had been working in the factory again this summer. This, indeed, has its obvious rewards, but the dangers of such a situation are equally obvious. I quickly learned the value of self-discipline, as I worked diligently even at times when I did not feel like it. Such discipline was certainly necessary as the weeks rolled by, and it is something that I will long appreciate. This sort of discipline as well as my greater appreciation and understanding of both authors' texts would not have been developed had I not received this grant.

Applicants for Younger Scholars awards come from high schools and colleges all over the United States. In the competition for grants during the summer of 1989, there were 724 applicants and 157 awards. Of the 327 high school applicants 66 received awards. Historically, about 20% of the applicants have received awards in this program. Applications in the high school program are reviewed by panels of high school teachers who come from a wide range of institutions.

The deadline for applications is November 1 for the following summer. Complete information regarding the program as well as hints and advice for applicants may be obtained from the Younger Scholars Guidelines, National Endowment for the Humanities, 1100 Pennsylvania Avenue NW, Washington, DC 20506; 202/786-0463.

ON THE LIGHT SIDE

By Jean Watts

California Younger Scholars

Three young Southern California women are among the 49 award winners in the 1991 Younger Scholars program of the National Endowment for the Humanities.

Amy R. Haley of Westridge School in Pasadena, Agnes Y. Huang of Irvine High School, and Elizabeth J. Siebel of The Thacher School in Ojai received grants to pursue individual research projects of their own design during nine weeks of full-time work in the summer.

Their proposals were (respectively): "At Home, Quiet, and Confined: Relationships Among Women in the Novels of Jane Austen"; "The Search for an Asian-American Identity Through the Works of Maxine Hong Kingston": and "Public Expectations and Private Realities: A Study of Black and White Women in the Antebellum South."

Collaboration is the Key to Successful Evaluation At San Diego City Schools

by Susan Millett

The literature on evaluation of educational programs suggests that program evaluation appears to be most effective when (1) a collaborative relationship exists between program staff and the evaluation team, and (2) the evaluative findings become the common knowledge of program providers at all levels. During the 1989-90 school year, San Diego City Schools approached the annual evaluation of its Gifted and Talented Education (GATE) program with that important tenet in mind. The evaluative focus was one of providing technical assistance to the program via a collaborative model. The resulting product has the potential for empowering GATE staff to modify their program in a way which ultimately improves their services to students.

The process of evaluating the gifted program in San Diego began with an evaluation design which reflected input from both GATE and evaluation personnel. This collaboration generated research questions which addressed state-mandated criteria, district goals and objectives, and issues of special interest to the local program and its participants. For example, district concern about the dropout rate was reflected in an evaluation question intended to assess the program's efforts to assist underachieving students in the gifted population.

GATE staff additionally assisted in drafting comprehensive survey instruments for student, teacher, and parent groups. The surveys included questions about opportunities for student input, opportunities for teacher participation in program planning, methods used to communicate with parents, and parent participation in GATE-sponsored activities. The surveys also included questions to elicit the attitudes and opinions of the gifted community regarding the impact of specific program aspects on students. Collective responses from student, teacher, and parent groups were considered essential in promoting progressive modification within the program.

Data collection also included key academic indicators for program participants, specifically norm-referenced test scores and grade point averages. These important indices served not only to measure the degree to which students had achieved academic goals established by the program, but they also became valuable tools in determining whether or not the program was making a difference in the instruction of the gifted student. Not surprisingly, when the test scores and grade point averages of gifted students who were enrolled in the program were compared with those of certified gifted students who were not program participants, the data demonstrated that students in the GATE program significantly outperformed their non-participating cohorts at all grade levels.

To facilitate program planning, the GATE program received preliminary, summarized findings throughout the year, as data became available following analysis by evaluation staff. The on-going communication between program and evaluation personnel generated improved revisions in the review process and helped to ensure a more comprehensive and functional product to assist program planners.

Recognizing that genuine progress requires a pluralistic effort, the GATE staff in San Diego will be distributing the final report to all 700 teachers of GATE classes, each principal and head counselor in participating schools, and every parent with a student enrolled in the program. This distribution of key information serves to ensure awareness of identified strengths and weaknesses in the program and promotes cooperation and rapport among the larger gifted community by providing prompt feedback to interested survey respondents.

The Gifted and Talented Education program and evaluation services in San Diego City Schools are committed to the collaborative model to guarantee the technical support required of a program as the needs of a diverse student population evolve. Given this cooperative approach, GATE staff is optimally serving the nearly 10,000 gifted and talented students enrolled in the program.

Susan Millett is an Evaluation Analyst with the San Diego CUSD. She can be reached at (619) 293-8517.

Movie Review: *Little Man Tate*

by Diane Mountford

Coming this fall to a theatre near you will be "Little Man Tate," a film which offers the film-going public a rare look into the problems and challenges of giftedness. The top-notch cast, the quality of the film, and the fact that it is Jodie Foster's film directing debut, promise to make it widely-viewed. Therefore, those in the field of gifted education will want to look at what the movie says, and how giftedness is portrayed.

The film deals with the trials and tribulations of Fred Tate, a seven-year-old prodigy stuck in a stifling second-grade classroom where he receives no academic stimulation, and where he has no friends. At recess he draws Leonardos on the pavement with chalk, while the "normal" little boys play ball. In class, when it is his turn to accompany the teacher in her favorite moralistic ditty, Fred plays the song backwards. Outside school he reads avidly, plays piano at competition level, solves complex mathematical equations, dreams in Van Gogh paintings, and has an ulcer because he worries so much about everything from his mother's employment to the depletion of the ozone layer. He is, in short, a very gifted, very lonely child, and is beautifully portrayed by first-time actor Adam Hann-Byrd.

Fred is a very quiet, withdrawn child: a reactor rather than an actor. He is acted upon by the other characters in the film, who are very strong and represent various facets of, and possible solutions to, Fred's problems. Jodie Foster plays Dede, Fred's single mother, the emotional, social side of Fred. She wants more than anything for her son to be a happy, normal little boy. She thinks he spends too much time reading, and refuses to admit that there is anything wrong with her child's life until she throws him his seventh birthday party and no one shows up. Her relatively uneducated background has not prepared her to deal with Fred. She is unable to interact intellectually with this boy who becomes more of a mystery every day, but she loves him fiercely and provides the safe harbor he requires.

Into the lives of Fred and Dede comes Jane (Dianne Wiest), a child psychologist who runs a private school for gifted children. She takes Fred under her wing and tries to provide for him the intellectual stimulation that has been lacking in his schooling and home life. Jane, however, is unable to deal with Fred on an emotional level. Thus, Fred's battle to balance the emotional and intellectual parts of his personality is aptly illustrated and amplified in the battle between the two strong women in his life.

Two other characters provide other influences and options. Jane's former protegé (and Fred's idol for a time) known as the Math Magician, is the egocentric specialist. He is well aware (as he has been told numerous times) that he is a great deal smarter than most other people, and he does his best to ensure that they don't forget it. The other strong male influence on Fred is Eddie (in a charming performance by Harry Connick, Jr.), a laid- back, unfocused college student. He shows Fred that life is not always terribly serious, that physics can be applied to playing pool, and that a piano can play honky-tonk.

My main concern about how the film portrays gifted education stems from the amount of money in evidence at the gifted school. Jane's school is a fortress of eurostyle elegance which admirably reflects her character, but which makes it look as if gifted education has all of the money. There is no mention that there might be a program available through Fred's public school. The only alternatives given in the film are a poor (although not too overcrowded) public school and the sleek marble halls of a private gifted school.

Some may feel a pang that the only educator in evidence is such a cold fish, but her character is specific enough that she can be viewed as an individual, rather than an archetype.

Competitions for the gifted are also presented in a less than favorable light. The Odyssey of the Mind program is named and part of a competition is shown, but the segue to a stilted math contet gives a false impression.

On the whole, the film offers a complex, very sympathetic view of a child outcast because of his extraordinary giftedness. Although the end of the film finds Fred happily entrenched in gifted school, with peers and friends, Foster never announces a winner in the emotional-intellectual battle between Dede and Jane. The audience is left with the understanding that neither motherly love nor intellectual stimulation alone will be enough to nourish this incredible child. Fred has found a niche where he will not be labeled a freak, and along the way has learned that his being smart doesn't mean he no longer has the emotional needs of a child.

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- Agenda for the workshop

Information for Presenters

1. The Conference Committee is seeking a broad range of workshops. Two areas are to be highlighted this year.
   - The preconference *Celebrating Diversity* will address the changing demographics of California, e. g., serving linguistically or culturally diverse students, using situational identification methods, finding and serving the underachieving and learning disabled gifted, etc.
   - A mini-conference for parents has been scheduled for Saturday morning.
2. Most workshops are 1-1/4 hours in length. A few double sessions of 2-3/4 hours can be arranged. If your topic requires that presentation format, please indicate below.
3. Expenses for travel and attendance at the conference are the responsibility of each presenter. Presenters who plan to attend any session at the conference other than the session(s) she/he is presenting must register for the conference. CAG will extend a year's complimentary membership to the primary presenter of each workshop, and will reimburse up to $25 for copying of handouts.
4. Each presentation room will be equipped with an overhead projector and screen. A limited number of VCR's will be available. If your presentation requires one, please indicate below. Any other AV equipment must be provided by the presenter.
5. Presentation rooms are set theater style. If your workshop must have a table for each participant, please indicate below.
6. Any special requirement may limit your selection possibilities. Rooms are assigned based on special requirements which must be stated at this time!

Special requirements: _____

Please give the name and contact information for a person who could recommend you as a presenter.

Name: _____ Phones: Work: (_____) _____

Position: _____ Home: (_____) _____

MEMBERSHIP·APPLICATION

Please share this copy of the *Communicator* with a friend when you have finished reading it. He or she might like to use this form to become a CAG member and active supporter of gifted education. Because of CAG's role in lobbying for appropriate education for gifted and talented students, dues payments to CAG are not tax deductible as charitable contributions for Federal income tax purposes.

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Role: ❑ Administrator/coordinator ❑ Board of Education member ❑ Consultant

❑ Counselor/psychologist ❑ Parent ❑ Teacher ❑ Other _____

Special Skills/Interests: ❑ Arts ❑ Humanities ❑ Math ❑ Science ❑ Computers ❑ Advocacy/ legislation

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